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ILLUSTRATED INDEX

OF

BRITISH SHELLS.

CONTAINING

FIGURES OF ALL THE RECENT SPECIES,

With Names and other Enformation.

BY

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PREFACE.

The first idea of this Work arose from the occasional use of Mr. Damon's 'Catalogue of the Shells of Great Britain and Ireland,' named after the 'History of British Mollusca,' etc. Here was, on one side, a very useful list of names, without figures or references to guide an inquirer to the species; and on the other, a very large and splendid Work, placed by its heavy price beyond the reach of Naturalists in general. There was nothing between the two; nothing within reach that would assist collectors of British Shells to name their acquisitions from ocean, beach, river, pond, or hedgerow. A public want seemed here to be discovered. It was thought that a list like the above, with a coloured drawing of every species, if produced at an available price, would supply that want. At first no more than this was thought of, but afterwards, as the preparations advanced, various suggestions were made tending to some extension of the plan. The results are here presented.

About 700 Figures in the Plates represent all the recognized species. They amount to 600, being 60 more than are admitted in the latest monograph. The greater part of these are either new or newly introduced as British. The rest are raised from varieties to species.

As the nomenclature used by Messrs. Forbes and Hanley in their great Work will be most generally adopted in this country, it is followed here with very few alterations; and the synonyms given (in italics) are selected from those which are most familiar and likely to be met with.

Some information is added respecting habits and localities, range of depth of marine species, and comparative abundance. The letters C., Cc., Mc., R., Rr., and Mr., signifying 'common,' 'extremely common,'

'moderately common,' 'rare,' etc., must be taken with great caution, especially the latter, as subject to continual change.

A list is given of British Fossil Shells identical with now living species.

A familiar description of British Mollusca and some peculiarities in their families and genera will, it is hoped, form a useful and suitable introduction to the names and figures. The Author's best thanks are due to his friends, Madame De Burgh, who has collected many beautiful shells; R. M'Andrew, Esq., F.L.S., whose dredging experiences are so extensive; J. G. Jeffreys, Esq., F.R.S., etc., whose researches have resulted in so many additions to our Fauna; Mr. Brice Wright, the Naturalist, of Great Russell Street, and others, who have in the most liberal manner supplied him with specimens from which his drawings are taken. The loan of delicate and minute shells to authors and artists has so often proved disastrous, that nothing but a generous friendship, and a zealous love of Natural History, could have induced proprietors so freely to incur the risk.

INTRODUCTION

TO

SHELL-BEARING BRITISH MOLLUSCA.

A common garden Snail, observed crawling and feeding, is easily seen to possess a distinct head, upon which are four feelers or horns, with eyes at the end, and underneath which is a mouth; a broad disc, extending the whole length of the body, is the organ of locomotion; a spiral or coiled shell surmounts the whole.

If, on the other hand, an Oyster be opened, no distinct head, or place for eyes or mouth, can be seen, but only a seeming mass of pulp, with a round gristle in the centre (the muscle of attachment), the former enclosed in a soft skin with a double fringe round the edge (mantle), placed within a shell composed of two pieces.

All Mollusca are more or less completely represented by these two. The Snail and its class are named *Gasteropoda* (abdomen-creeping), and their shells *Univalves*; the Oyster and its class, *Acephala* (headless), and their shells *Bivalves*. We begin with the latter class at—

PLATE I.

Pholadidæ, or "Borers," 1-13, have the power of piercing and inhabiting holes in submarine wood, rocks, and stones. The hinder part of the body is lengthened out in the form of a double tube, with openings for the ingress and egress of fluids. Teredo, 1-6, has short valves, two pallets fixed at the sides of the siphons, and lines its hole with a shelly tube. Pholas and Pholadidea, 8-13, have long valves and some-

times accessory plates. The shell of Xylophaga, 7, is like that of Teredo, but the animal has neither pallets nor tube.

Gastrochæna, 14, has a gaping shell, and encloses itself in a bottle-shaped covering of cemented stones and sand. Saxicava, 15, 16, Venerupis, 18, and Petricola, 17, burrow in sand, or live in holes of rocks.

Myadæ, or "Gapers," Mya, 19, 20, and Panopæa, 21, 21*, burrow downwards in sand and mud, their siphons protected by a coriaceous covering. Their shells are not closed all round, and those of Mya have a spoon-shaped process in the hinge of one valve.

Corbulidæ, 22-28, have short siphons with fringed edges, and the foot protrudes through a hole in the otherwise closed mantle.

PLATE II.

Poromya, 1, 1*, and the beautiful pearly Pandora, 2, 3, might be included in the family of Corbulidæ. Lyonsia, 4, and Thracia, 5-10, represent the Anatinidæ. 11-18 are Solenidæ, or "Razor-shells." Solens burrow in deep holes in the sand, where they remain in a perpendicular position at a great depth below the surface, where yet their presence may be traced by the opening left. Their large muscular foot enables them to take great leaps when out of the holes.

PLATE III.

Psammobia, 1-4, and Tellina, 5-16, include some of our most beautiful shells. The animals have a large, fleshy, curved foot, and the mantle open and fringed. Their shells are provided with an external ligament, and teeth on the hinge. Donax, or "Wedge," 19, 20, has long, separated, fringed siphons. Besides the small external ligament, properly so called, the Mactridæ have a triangular pit in the hinge of their shell, containing an elastic substance or spring, designed to resist the action of the adductor muscles. Mactra, 21-26, ends the Plate.

PLATE IV.

Lutraria, 1-3, is another genus of Mactrida. The Venerida, 4-16 and 23, or "Venus" tribe, differ from it in not having the spring-holding pit. Artemis, 10, 11, is known by a large angular bend in the pallial impression; and Cytherea, 23, is distinguished from Venus

by one tooth on the hinge standing out a little way from the central ones. Astarte, 17-22, belongs to the Cyprinida.

PLATE V.

Fig. 1-3 also represent genera of Cyprinidæ. They have no bend in the palleal impression. Cardium, or "Cockle," 4-13, presents a psculiarity in the foot, which is large and bent, and enables the animal to leap in a very lively manner. The family of Lucinidæ occupy the remaining figures. Lucina has a curious tongue-shaped doubling of the pallial impression.

PLATE VI.

The Kelliadæ, 1-15, are marine, while the Cycladidæ, completing the Plate, are fresh-water bivalves, and may be found in many ponds and rivers.

PLATE VII.

Of the Unionidæ, or "Fresh-water Mussels," Unio, 1-3, has teeth on the hinge, and Anodon, 4, has not: it is a thin shell. The foot of these molluses is very large, and is used in cutting the animal's way through the mud in which it burrows. Of the marine, or true Mussels, Modiola, 6-9, and Crenella, 12-17, have a portion of the shell reaching beyond the point or apex, which in Mytilus is terminal, 18-21. Dreissina, 5, is shaped like Mytilus, but lives in fresh-water docks. The Mytilidæ attach themselves by means of horny threads spun from the foot, and called a "byssus."

PLATE VIII.

Shells of Arcada, 1-14, have the hinge characterized by a series of teeth on each side of the apex. Nucula, Arca, and Pectunculus are easily distinguished. Limopsis, 14, has a spring pit between the two rows. Our figure of Pinna, 16, is from a young specimen: it grows to great size, and spins a very silky byssus. The shell of Anomia, 18, is fixed to rocks, etc., by means of a bony button passing through a hole or sinus in the lower valve. Lima, 22-24, has a light, thin shell, and its mantle is adorned with beautiful fringes. It swims rapidly through the water by the opening and shutting of its valves, and also has the

habit, in seasons of rest, of protecting itself by a network or vest of marine fragments strung together by its byssal threads.

PLATE IX.

Contains the shells of our Pectens, or Scallops, 1-16. The animals swim like *Lima*, as above, and also spin a byssus.

The class *Brachiopoda*, 17-24, so named because what seem to be organs of locomotion consist of a pair of coiled, ciliated arms, ends the list of Headless Molluscs and their bivalve shells.

PLATE X.

Class Pteropoda, 1-4, contains minute Mollusca, with glassy shells variously formed, and wing-like expansions for swimming.

Chiton, 5-17, or "Coat of Mail," which may often be seen incrusting rocks, commences the Gasteropoda; although seemingly fixed, they are capable of locomotion, using the whole of the oval disc, which may be seen on turning them over, for the purpose. The same may be said of the "Limpet" tribe, Patella, 1-22.

PLATE XI.

This Plate commences with other forms of the Limpet tribe, Fissurella, 1, 2, with a hole at the top; Puncturella, 3, with a fissure near the top; and Emarginula, 4-6, with a slit at the margin. Haliotis, 7, or pearly "Ear-shell," leads to the Trochida, or "Tops," 8-27.

PLATE XII.

Ianthina, 1-4, is genus of oceanic molluscs, which are provided with a beautiful floating apparatus, on which the female carries her egg-bags.

Neritina, 5, and the Paludinidæ, 8-11, live in fresh-water. The animal of Paludina is sprinkled all over with bright, golden specks. The Littorinæ, or "Winkles," 12-24, are marine, and frequent the shore among seaweeds. Lacuna, 25-32, belongs to the same family.

PLATES XIII., XIV.,

Are small genera, various in their characters and habits, but reasonably included in the last family, Littorinidæ.

PLATE XV.

The animals of Turritella, 1-3, and Cacum, 6, 7, are not unlike, although the shells are so different; eyes at the base of the tentacles, a short foot, and horny operculum. The somewhat similar animal of Aporrhais, 4, 5, is brilliantly coloured with gold and red. Cerithium, 8-10, differs from Cerithiopsis, 11-15, more in regard to the animal than the shell; the latter animal has a retractile proboscis, and its operculum is not spiral.

PLATE XVI.

Chemnitzia, 1-11, and Truncatella, 12, together with Stylifer, Eulima, and Odostomia, form the family of Pyramidellida. Notwithstanding the difference in the shells, the animals are very similar, having a retractile proboscis, and eyes immersed at the base of their tentacles.

The animal of *Natioa*, 13-19, has a lobe on the upper part of the foot, reflected over the shell in front, and another lobe behind. The shells of *Laminaria*, 23, 24, are completely enveloped in similar lobes.

PLATE XVII.

The shells of *Odostomia* are known by a fold in the inner lip of the aperture.

PLATE XVIII.

Two Tritons, 1, 2, are admitted for the first time as British, on what we consider fair evidence, although only two or three specimens have been taken off Guernsey. One of T. nodiferus was incrusted by a truly British Lepralia. Murex, 3, is now familiar as an aquarian, as well as Purpura, 5. A milky secretion found in the head turns purple when exposed, and gives the celebrated purple dye. Buccinum, 7-13, includes the common "Whelk," 8. Fusus Berniciensis, 14, is among the rarest and most beautiful of our British shells.

PLATE XIX.

Nassa reticulata, 3, is a favourite inhabitant of the tank; it burrows in search of food among the pebbles, elevating its siphon above the

surface. Mangelia, 4-26, has a similar long siphon. The shell of Erato, 27, is wrapped in the lobes of the animal's mantle, as is also that of Cyprea, 28, the latter presenting a beautiful object.

PLATE XX.

After Tornatella, 1, and Ovula, 2, 3, come Bullidæ, 4-27, including several genera differing remarkably in the shape and disposition of the lobes of their mantles, which in some instances, as in Philine, 20-25, cover the shell. The stomach of Scapander, 26, 27, is a remarkable kind of mill, composed of two bones, between which the food is ground. The shells of Aplysia, 28, and Pleurotranchus, 29, 30, are quite internal. Spirula, 31, belonging to the Cephalopodous or Cuttlefish tribe, is only introduced doubtfully, as there is no proof of the species living in our seas.

PLATES XXI., XXII., XXIII., XXIV.

These are occupied by shells of Gasteropoda pulmonifera, so named because they breathe air by a pulmonary cavity, instead of water by gills. The Limnaada, or fresh-water Snails, contained in Plate I., live in water, but breathe by exposing the pulmonary cavity to air at the surface, Succinea, Plate XXII., 1–3, lives by the sides of streams, sometimes immersed. Conovulus, 4–7, affects brackish marshes. Our common Slugs yield, on dissection, thin shells, which are concealed beneath the mantle, Limax, 9–12. The shells of Testacellus, 13, 14, are fixed near the end of the foot, outside. The glassy shells of Vitrina, 15, 16, do not enclose the whole Slug-like animal. The other genera of Land Snails have shells large enough to receive the animal when retracted and withdrawn for repose.

BRITISH FOSSIL SHELLS.

The following living species are also found in a fossil state in drift and strata of the British Isles. They are all enumerated in Mr. Searles Wood's monograph of the Crac Mollusca.

The numbers refer to the species as figured in our Plates, Mr. Wood's nomenclature being inserted in italics when differing from ours.

Pl. I. Teredo 2. Pholas 11. Pholadidea 12. Gastrochæna 14, as *dubia*. Saxicava 15, 16. Venerupis 18. Mya 19, 20. Panopea 21, 21*, as *Faujasii*. Corbula 22, 23? Sphænia 25. Neæra 27.

Pl. II. Poromya 1. Pandora 2, as inæquivalvis, 3, as pinna. Thracia 7, 8. Solen, 13, 15. Solecurtus 18, as Mactra strigilata. Syndosmya, as Abra, 19, 22.

Pl. III. Psammobia 1, 3, 4. Tellina 5, 6, 7, 9, as orala, 15, as Balthica, 16. Scrobicularia 18, as Trigonella plana. Donax 19, as vittatus. Mactra 20, 21, 22, as ovalis, 23, 25, 26.

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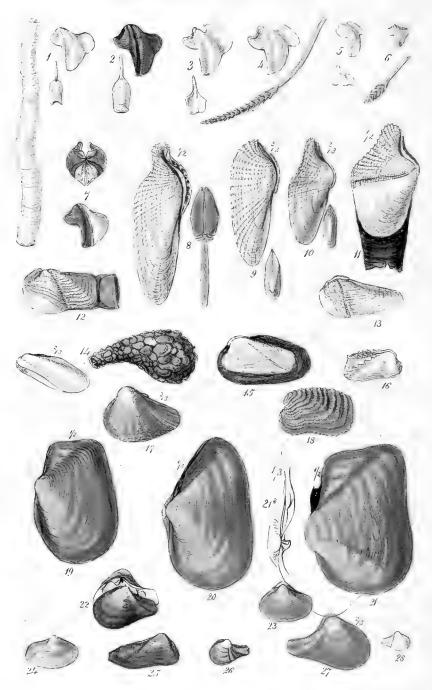
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BRITISH SHELLS, PL.L.



6 3 Sowerier

PLATE I.

TEREDO. Pierces and inhabits wood.

Fig. 1. T. NAVALIS, Linn.—T. Batavæ.—Herne Bay, R. Pallets shelly, crescented; valves with auricles extended sidewise; tube long.

2. T. NORVEGICA, Spengl.—T. Bruguieri.—Port Patrick, Teignmouth,

etc., Mc. Pallets shelly, not crescented; auricles not extended.

- 3. T. MEGOTARA, Hand. T. nana (young). Herne Bay, Devon, Swansea, etc., R. Pallets shelly, spade-shaped; auricles raised and expanded.
- 4. T. BIPENNATA, Turt.—Ireland, Scarborough, etc., R. Pallets horny, long; auricles lobed.
- 5. T. Malleolus, Turt.—Torquay, Rr. Pallets shelly, mallet-shaped; valves narrow.
- 6. T. PALMULATA, Lamk.—T. bipalmulata.—Floating wood, Ire., S. Eng. Pallets horny, short; valves small, shaped like T. navalis.

XYLOPHAGA. In fixed and floating timber.

7. X. Dorsalis, Turt.—Ayrs., Dubl., Exm., Scarb., etc., C. Two dorsal plates, no tube, no pallets.

Pholas. Pierces and inhabits stone.

- 8. P. Dactylus, Linn.—P. hians, P. callosa.—Eng., Scot., Ire., C. Dorsal plates four; hinge pitted.
- 9. P. CANDIDA, Linn.—Eng., Scot., Ire., C. One dorsal plate; valves not beaked.
- 10. P. PARVA, Penn.—P. callosa, P. tuberculata.—Salcombe, Belfast, Cornwall, etc., M. C. One dorsal plate; valves beaked.

 11. P. CRISPATA, Linn.—P. bifrons.—Hastings, Liverp., Scarb., Dubl.,
- Forth, etc., C. No dorsal plate; valves broad, beaked, with oblique division.
- 13. P. STRIATA. Rare and doubtful as British. Valves closed.

Pholadidea. Pierces and inhabits stone.

12. P. PAPYRACEA, P. Loscombiana, P. Goodalli.—S. Devon, N. Ire., R. Valves closed, with a cup. P. lamellata, Turt., when young, not closed; no cup.

Gastrochæna. Bores and inhabits stone, thick shells, etc.

14. G. MODIOLINA, Lamk.—G. Pholadia, G. hians, Mya dubia, Mytilus ambiguus, Pholas faba.—Torbay, Birterbuy, Galway, Weymouth, etc. Valves thin, gaping, enclosed in bottle-shaped tube.

Saxicava. Bores and inhabits stone.

15. S. RUGOSA, Linn.—Mytilus r., Hiatella r., S. gallicana, S. pholadis, Byssomya pholadis, Mya byssifera.—Eng., Scot., Ire., C. Valves

16. S. ARCTICA, Linn.—(Mya) Hiatella a., Anatina a., Hiatella minuta, Solen minutus, S. rhomboides, Agina purpurea, Solen p.—Eng., Scot., Ire., C. Valves rhomboidal; angle serrated.

Omitted.—S. fragilis, Nyst. Not the young of S. rugosa. Vigo Bay.

Petricola. Inhabits stone.

17. P. LITHOPHAGA, Retz.—P. striata, costellata, rocellaria, ruperella, Lamk., Mya and Sphania decussata.—Cork, Bristol, R. as British.

VENERUPIS. Bores and inhabits stone.

18. V. Irus, Linn. (Donax).—Tellina cornubiensis, Cuneus foliaceus, Petric., and Pullastra, I.—In limestone at Plymouth and other southern coasts. Wedge-shaped.

Mya. Burrows in mud and sand.

19. M. TRUNCATA, Linn.—M. ovalis and Sphænia Swainsoni (young).
—Various localities and depths, C. Truncated at end.

20. M. ARENARIA, Linn.—Herne Bay, Portsmouth, etc., C. Tapering at end.

Panopæa. Burrows in mud.

21. P. NORVEGICA, Spengl.—P. glycimeris, P. arctica.—Scarborough, Zetland (90 fath.), Rr. Quadrate.

21*. P. Aldrovandi, Lamk.—Cornwall, one specimen, Jeffreys. Oblique.

Corbula. Dredged in mud and sand.

22. C. NUCLEUS, Lamk.—C. striata, Mya, and C. inaquivalvis.—Dublin, Torquay, Forth, 4 to 80 fath., C. Valves unequal, beaked.

23. C. ROSEA, Brown.—Weymouth, Rr. as Brit. Valves not beaked.

24. C. OVATA, Forbes.—Isle of Man, Rr. Oval, truncated at end.

SPHÆNIA. Burrows in foliaceous shells.

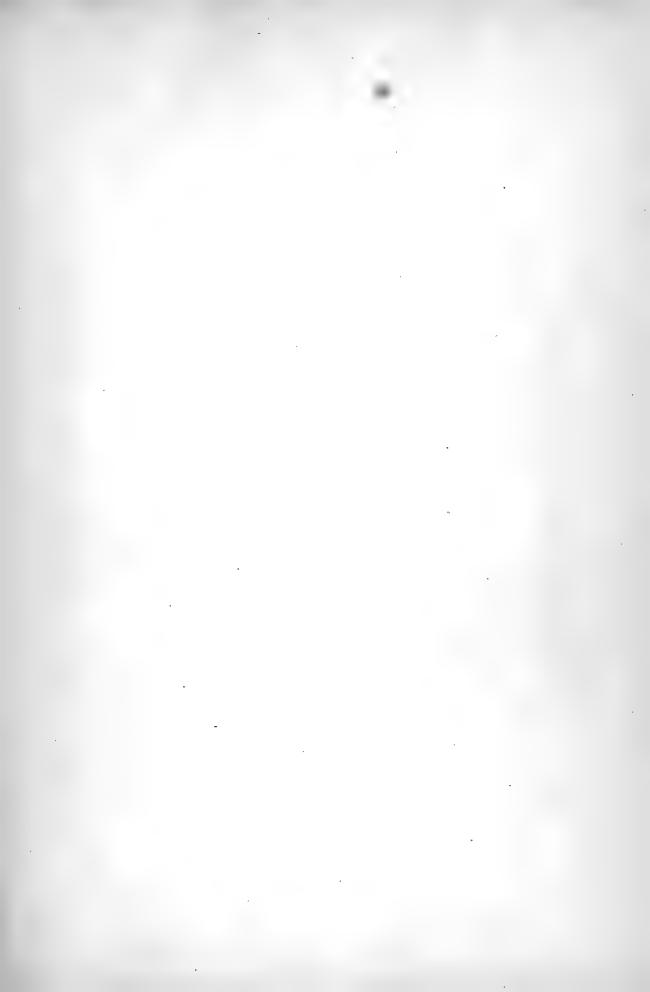
25. S. Binghami, Turt.—Corbula B.—Torquay, Guernsey, Swansea, Forth, etc., R.

NEERA. Lives incrusted in sand.

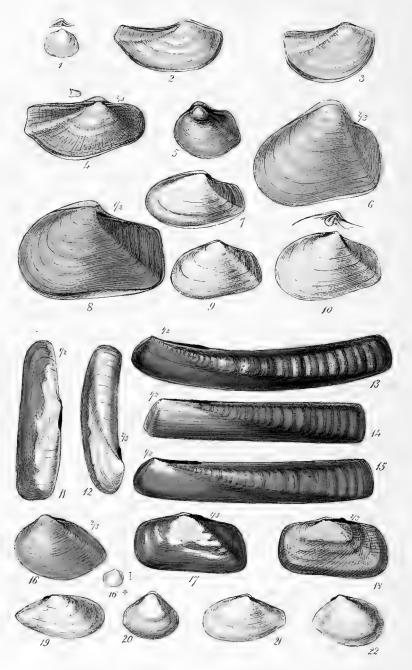
26. N. COSTELLATA, Desh.—Corbula c. N. sulcata.—Loch Fyne, Rr. Radiately 3-ribbed.

27. N. CUSPIDATA, Olivi.—Forth, Northumberland, Cape Clear, etc., Mr. Pear-shaped.

28. N. ABBREVIATA, Forbes.—Loch Fyne, Mc. Radiately 1-ribbed.



BRITISH SHELLS, PL.H.



G.B. Sowerby.

PLATE II.

Poromya. On mud, in deep water.

1. P. GRANULATA, Nyst.—P. anatinoides, Forbes.—Skye, R.

1*. P. Subtrigona, Jeffreys.—Shetland, Mr. Minute, posteriorly expanded. See Pl. IX.

PANDORA.

2. P. ROSTRATA, Lamk.—Tellina inaquivalvis, Linn.; P. margaritacea and inaquivalvis.—S. Devon?, Guernsey, R. as Brit. Valves long.

3. P. OBTUSA, Leach.—Solen Pinna, Mont.—S. Devon, Dorset, Mc. Ire., R. Valves short and broad.

Lyonsia. With byssal attachment.

4. L. NORVEGICA, Chenn.—Mya and Anatina n., Mya and Anatina striata, M. nitida, Lyonsia elongata, Myatella, and Osteodesma.—
Tenby, Bantry, Oban, etc., 5 to 80 fath. With movable ossicle on hinge.

THRACIA. Laminarian and Coralline.

- 5. T. DISTORTA, Mont. (Mya) Anatina and Amphidesma d., Th. truncata. Distribution general, but not common. Short, truncated, irregular.
- 6. T. CONVEXA, Wood.—(Mya) Anatina and Amphidesma c., T. declivis.—S. Devon, Bantry Bay, Arran, etc., Mc. Inflated.
- 7. T. PHASEOLINA, Lamk. Amphidesma p., T. declivis. Various localities and depths, C. Oval, obliquely truncated.
- 8. T. Pubescens, Pult.—(Mya) Anatina and Amphidesma p., T. declivis.—S. Devon, Cornwall, Belfast, etc., C. Oblong, straightly truncated.
- 9. T. VILLIOSULCA, Macgillivray. T. ovata, Brown. Exmouth, Swansea, Bantry Bay, etc. Various depths, Mc.

Cochlodesma. Laminarian and Coralline.

10. C. PRÆTENUE, Pult.—(Mya) Anatina, Ligula, and Amphidesma pr.
—Dorset, Devon, Man, Bantry B., Oban, etc., (25 to 60 fath.), R. Spoon-shaped process on hinge.

CERATISOLEN. Burrows in sand.

11. C. LEGUMEN, Linn.—(Solen) Psammobia and Solenicurtus l.—Exmouth, Swansea, Bantry, etc., C. Hinge nearly central.

Solen. Burrows perpendicularly in sand.

Fig.

- S. PELLUCIDUS, Penn.—Various British localities, 6 to 100 fath. Curved; hinge not terminal.
- S. Ensis, Linn.—Eng., Scot., Ire., generally 5 to 15 fath., C. Arched and slender.
- 14. S. MARGINATUS, Pult.—S. vagina, Penn., not Linn.—Exmouth, Clyde, Cork, etc., littoral to 10 fath., Mc. Straight, with terminal constriction.
- 15. S. SILIQUA, Linn.—S. novacula, S. ligula.—Eng., Scot., Ire., many places; littoral and laminarian, C. Straight, end not constricted.

DIODONTA.

 D. FRAGILIS, Linn.—(Tellina) Psanmobia f., Tellina jugosa and ochroleuca.—Dublin, Tenby, Weymouth, R. Oval or wedgeshaped.

16*. D. BARLEEI, Jeffr.—Arran, Rr. Minute, subquadrate.

Solecurtus.

17. S. COARCTATUS, Gmel.—S. cultellus, S. emarginatus, S. antiquatus, etc.—Torbay, Anglesea, Man, Skye, etc., R. Oblong, smooth.

18. S. CANDIDUS, Renieri.—(Solen) S. strigilatus, Turt., not Linn., Psammolia scopula.—S. Devon, Dublin, etc., R. Striated.

SYNDOSMYA.

19. S. PRISMATICA, Mont.—(Ligula) Mya and Amphidesma p.—Weymouth, Forth, Dublin, Antrim, etc., littoral, Mc. More pointed and narrow than S. intermedia.

20. S. TENUIS, Mont.—(Mactra) Amphidesma t.—Dorset, Scarborough,

Antrim, etc., 5 to 100 fath., Mc. Short, subtrigonal.

21. S. INTERMEDIA, Thompson.—Mya and Syndosmya nitida, Abra profundissima.—In mud, 6 to 100 fath., Zetland, Skye, Cape Clear, etc., R. Broader and more pointed than S. prismatica.

22. S. Alba, Wood.—(Mactra) M. and Amphidesma Boysii and A.

album.—Brit. co. generally, C. Short, rounded, oval.



BRITISH SHELLS, PL.TU.

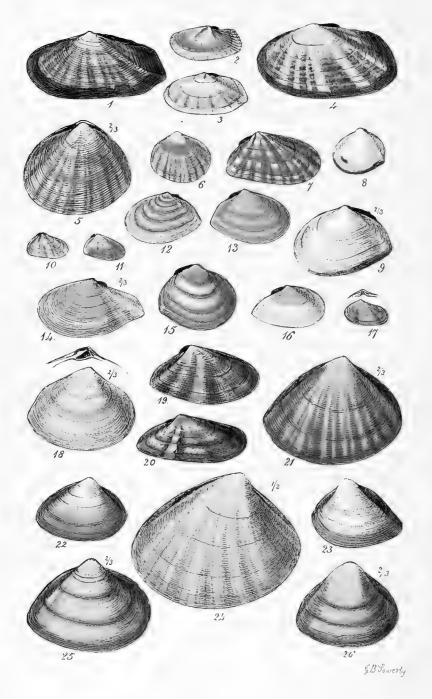


PLATE III.

PSAMMOBIA. Inhabits sand and mud.

Fig.
1. P. FERROENSIS, Chemn.—(Tellina) T. incarnata, T. radiata, T. trifasciata, T. truncata.—Brit. co. generally; coralline, C. Oblong, keeled and angulated behind.

2. P. COSTULATA, Turt.—P. discors.—Torbay, Cornwall, Skye, etc., R.

Ribbed behind.

3. P. Tellinella, Lamk.—P. florida.—Exmouth, Guernsey, Tenby, Bantry B., Oban, Zetland, etc., 5 to 50 fath., C. Oval, smooth.

4. P. Vespertina, Chemn.—(Lux V.) Solen, Sanguinolaria V., Tellina depressa, variabilis.—Weymouth, Scarborough, Tenby, Bantry, etc., Guernsey, C. Not angular nor keeled behind.

TELLINA.

5. T. CRASSA, Penn.—T. maculata, T. rigida.—S. Devon, Guernsey, Man, Tenby, Bantry, Forth, etc., low-water to 15 fath., C. Thick, orbicular.

6. T. BALAUSTINA, Linn.—Birterbuy, Skye, Exmouth, Rr. as British.

7. T. DONACINA, Linn.—T. trifasciata, T. variegata, T. Llantivyi.— Various British loc., and S. Europe, 5 to 50 fath., C. Wedgeshaped.

8, 9. T. PROXIMA, Brown.—Var. T. calcarea (9), T. ovalis, T. sordida, Sanguinolaria sordida, Macroma tenera.—Skye, etc., R.

10, 11. T. PYGMÆA, Phil.—Devon, Cork, Shetland, etc., 8 to 50 fath., C. Smaller, more convex, and more truncate than T. donacina.

12, 13. T. Tenuis, Da Costa.—T. planata, T. polita, T. exigua.—On sandy shores, in various localities, C. Flat, thin.

14. T. INCARNATA, Linn.—T. squalida, T. depressa.—Devon, Bantry,

Tenby, R. Flat, beaked.

15. T. SOLIDULA, Pult.—T. rubra, Da Costa, T. carnaria, T. zonata, Psammobia solidula, T. Balthica.—All British coasts; littoral, C. Thick, inflated.

16. T. FABULA, Gronovius.—T. discors.—On sandy shores generally, C. Valve with oblique striæ (omitted by error).

ERVILLIA.

17. E. CASTANEA, Mont.— (Donax) Mesodesma c., Capsa c.—Cornwall and Scilly Isles, R. Ligament within.

SCROBICULARIA.

18. S. PIPERITA, Gmel.—Generic syn.: Mya, Venus, Trigonella, Mactra, Lutraria, Listera.—Specific syn.: hispanica, borealis, plana, Fig.

gaditana, Listeri, compressa.—Scarborough, Southend, Swansea, Cork, Clyde, C. Broad, compressed.

Donax.

19. D. ANATINUS, Lamk.—D. trunculus, Linn.?, Cuneus vittatus, D. ruber (young).—Brit. co. generally, sandy shores, C. Broad; margin crenulated.

20. D. POLITUS, Poci.—(Tellina) D. and Capsa complanata.—S. Devon, Bantry Bay, etc., Mr. Smooth; inner edge not crenated.

Mactra. Lives on sandy beaches.

21. M. STULTORUM, Linn.—(Cardium) Tellina radiata, Trigonella r., M. cinerea, M. magna.—British co. generally, C.

22. M. ELLIPTICA, Brown.—British co. generally, C. Oval.

23. M. SUBTRUNCATA, Costa.—M. lactea, M. triangula, M. crassatella.
—Brit. co. generally, C. Obliquely cuneiform.
24. M. HELVACEA, Chemn.—M. glauca, M. neapolitana.—Odd valves

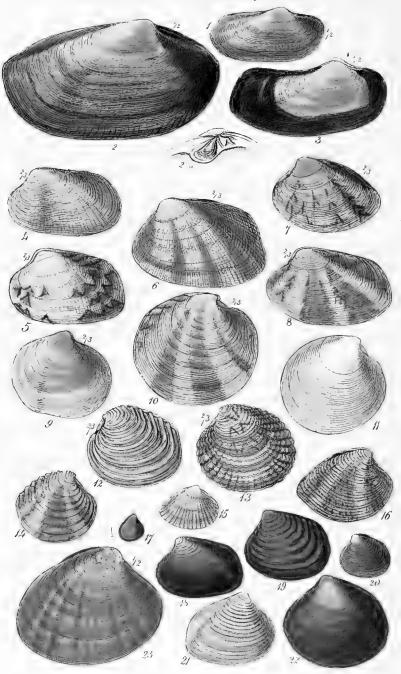
found dead in Cornwall, R. Large, obliquely oval.

25. M. SOLIDA, Linn.—Trigonella zonaria and gallina.—Brit. co. generally, C. Trigonal, thick.

26. M. TRUNCATA, Mont.—Forth, Cork, Cornwall, etc., C. Trigonal, deep, thick.



BRITISH SHELLS, PL. IV.



GB. Sowerby

PLATE IV.

LUTRARIA. Inhabits mud.

1. L. INTERMEDIA?, Sowb.—Perhaps only the young of L. elliptica.

2. L. ELLIPTICA, Lamk.—Mactra lutraria, Linn.—Scarborough, Torbay, Dublin, Forth, Lerwick, etc., C. Broad, oval.

3. L. OBLONGA, Chemn.—(Mya) L. solenoides, L. hians, Mactra hians, Chama magna.—Cornwall, Devon, etc., Mc. Arched, narrow.

TAPES. Burrows in mud and stone.

4, 5. T. PULLASTRA.—Wood.—Venus pullastra, V. perforans (var. f. 4), Venerupis, nucleus, Pullastra vulgaris, etc.—Plymouth, Scarborough, Swansea, Forth, etc., C.

6. T. DECUSSATA, Linn.—(Venus) V. litterata, V. florida, Venerupis and pullastra d.—S. Devon, Weymouth, Tenby, etc., Mc. Ob-

long, coarsely decussated.

T. AUREA, Gmel.—(Venus) V. nebulosa, V. anea, V. nitens, V. sinuata, Pullastra a.—Cornwall, Sussex, Bantry Bay, Loch Ryan, Mc. Yellow within.

8. T. VIRGINEA, Linn. — (Venus) V. rhomboides, V. sarniensis, V. virago, Cuneus fasciatus. — Various British loc., C. Pink within.

LUCINOPSIS, Forbes and Hanley. Sandy ground.

9. L. UNDATA, Pennant.—(Venus) V. sinuosa, V. incorrupta, Lucina undata.—Exm., Scarborough, Man, etc., 5 to 80 fathoms, M.R. Orbicular, flexuous at side.

ARTEMIS.

10. A. EXOLETA, Linn. — (Venus) Cytherea e. Pectunculus capillaceus.
—Sandy ground, on Brit. co. generally, low-water to 80 fath.,
C. Compressed; striæ coarse.

11. A. LINCTA, Pult.—(Venus) V. sinuata, Cytherea sinuata.—Various

Brit. loc., C. Dorsal edge sloping; striæ fine.

VENUS.

12. V. CASINA, Linn.—V. reflexu, V. lactea, V. discina.—Northumberland, S. Devon, Man, Bantry, Skye, etc., Mc. Concentrically laminated.

13. V. VERRUCOSA, Linn.—V. erycina, V. cancellata, etc.—Devon, Cornwall, Channel Isls., etc., C. Ventricose, warted.

 V. FASCIATA, Donov.—Various southern Brit. loc., C. Round, with thick ribs.

Fig. 15. V. OVATA, *Pennant*. — Brit. co. generally, C. Oval, radiately ribbed.

16. V. STRIATA, Donov.—V. gallina, V. Pennantii, V. rugosa.—Brit. co. generally. Shores and deep water, C.

ASTARTE.

17. A. TRIANGULARIS, Mont.—Mactra and Goodallia, minutissima and triangularis.—Northern parts of Britain, 15 to 20 fathoms, C. Minute, triangular.

18. A. ELLIPTICA, Brown.—Crassina e., Crassina ovata, and C. sulcata. Scotland, 5 to 10 fath., mud, M. C. Oblong, smooth near the

19. A. SULCATA, Costa. (Pectunculus) V. scotica and Damnoniensis, Crassina sulcata, etc. — Devon, Cornwall, Bantry, etc., C. Thickly ribbed.

20. A. COMPRESSA, Mont.—(Venus) Venus and Crassina Montagui, Cyprina comp.—Scarborough, Northumbria, Bantry Bay, Firth of Forth, 7 to 40 fath., M. C.

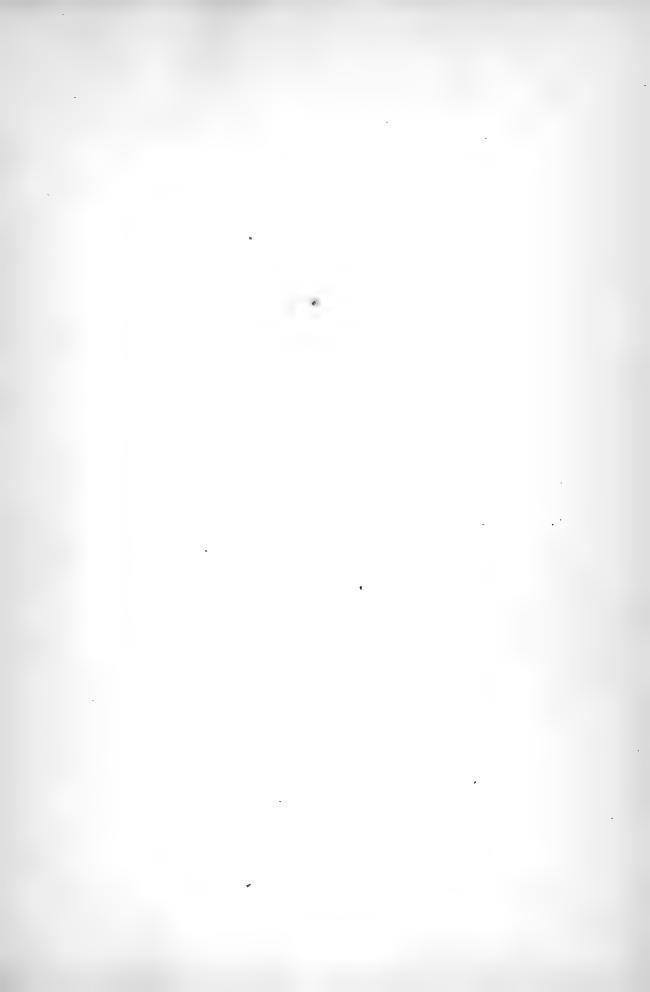
21. A. CREBRICOSTATA, Forbes.—Zetland and Skye (dead), R. Ribs

more numerous than in A. sulcata.

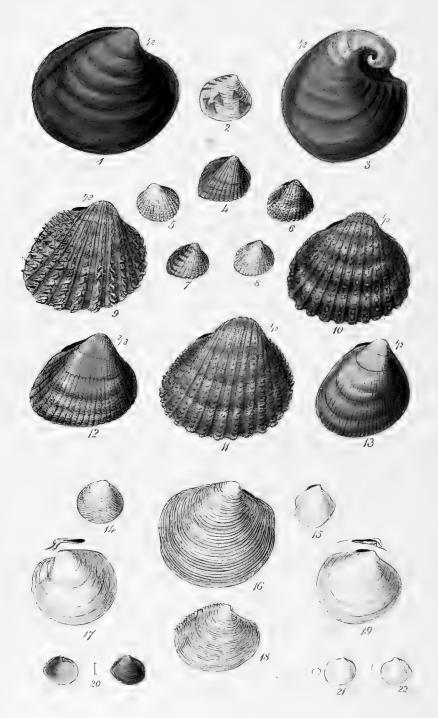
22. A. ARCTICA, Gray.—(Crassina) Venus borealis, Astarte compressa.— Aberdeen, Zetland, St. Andrew's bay, etc., Rr. Lenticular, not ribbed.

CYTHEREA.

23. C. CHIONE, Linn.—(Venus.) — Plymouth, S. Devon, Falmouth, Carnarvon, 12 to 20 fath., Mr.



BRITISH SHELLS, PL.V.



GB Some in

PLATE V.

CYPRINA.

Fig. 1. C. ISLANDICA, Linn. (Venus.)—C. vulgaris, V. mercenaria.—Brit. co. generally, most abundant north, 5 to 80 fath. Oval, with thick epidermis.

CIRCE.

2. C. MINIMA, Mont. (Venus.)—Gen. Cyprina and Cytherea triangularis, apicialis, Cyrillii, minuta.—Guernsey, Cornwall, Milford Haven, Clyde, Bantry Bay, etc., 10 to 50 fath., C.

ISOCARDIA.

3. I. COR, Linn. (Chama.)—I. hibernica, Cardita cor.—Dublin, Skye, etc., Mc. Heart-shaped, beaks coiled.

CARDIUM, or Cockle.

- 4. C. PYGMÆUM, *Donovan.—C. exiguum.*—Herne, Sark, Weymouth, Zetland, Bantry Bay, 5 to 50 fath., Mc. Hinder side large, angular.
- C. PAPILLOSUM, Poli.—Guernsey, St. Martin's Port, Jeffreys, R. Rather rounded, equally ribbed and grained.
- 6. C. PUNCTATUM, Broc., C. NODOSUM, Turt.—C. scabrum, Ph.—Exmouth, Falmouth, Galloway, etc., Mc. Angular behind.
- 7. C. FASCIATUM, Mont.—C. elongatum, C. ovale, C. parvum, C. rubrum (young).—Various Brit. loc., Mr.
- 8. C. Suecicum, Loven.—C. Swediense, Reeve, C. Loveni, Thompson.—Down, Oban, Zetland, 30 to 70 fath., Rr. Oval, equally ribbed.
- 9. C. ACULEATUM, Linn.—C. ciliare and parvum (young).—S. Devon, Mc. Thin, oblique, with thorn-like tubercles; interstices of ribs smooth.
- C. RUSTICUM, Linn.—C. tuberculatum, Linn.?—Paignton, Torbay, Velvet Strand, Dublin co., Mc. Thick, not oblique, coarsely wrinkled.
- 10. ECHINATUM, Linn.—C. mucronatum, C. spinosum.—Brit. co. generally, mud and sand, 7 to 80 fath. Oblique, wrinkled; hinder tubercles sharp.
- C. EDULE, Linn.—C. vulgare, C. zonatum, C. obliquum, C. crenulatum, C. rusticum.—Brit. co. generally. Common eatable, Cockle.
- 13. C. NORVEGICUM, Spengler.—C. lævigatum, C. serratum, C. oblongum, C. Pennantii.—Brit. co. generally. Sand and gravel, 15 to 80 fath. Smooth, variegated when young.

Fig. 14. L. DIVARICATA, Linn. (Tellina.)—Cardium arcuatum, L. arcuata, commutata.-Near Falmouth, 20 fath., Rr. Rounded, with di-

verging ribs.

15. L. FLEXUOSA, Mont. (Tellina.)—Venus sinuosa, Amphidesma flexuosa, L. sinuata; gen. Cryptodon, Axinus, and Ptychina. -Clyde, Bantry, Anglesea, etc., 7 to 80 fath., Mc. Thin, with a

- 16. L. Borealis, Linn. (Venus.)—Tellina radula, Lucina r., L. alba.— Many Brit. loc., 1 to 90 fath., C. Lenticular, concentrically laminated.
- 17. L. LEUCOMA, Turt.—L. lactea, not Linn., Loripes lactea.—Torbay. Scarborough, Bantry Bay, etc., low-water to 80 fath., C. Round,
- 18. L. SPINIFERA, Mont. (Venus.)—Myrtea s., L. hiatelloides.—Dartmouth, Plymouth, Hebrides, etc., 8 to 100 fath., M. R. Oval; dorsal margin spinose.

DIPLODONTA, Mont.

19. T. ROTUNDATA, Mont. (Tellina.)—T. undata, Lucina r., D. dilatata. —Dorset, Devon, Tenby, Bantry Bay, etc., 7 to 25 fath., R.

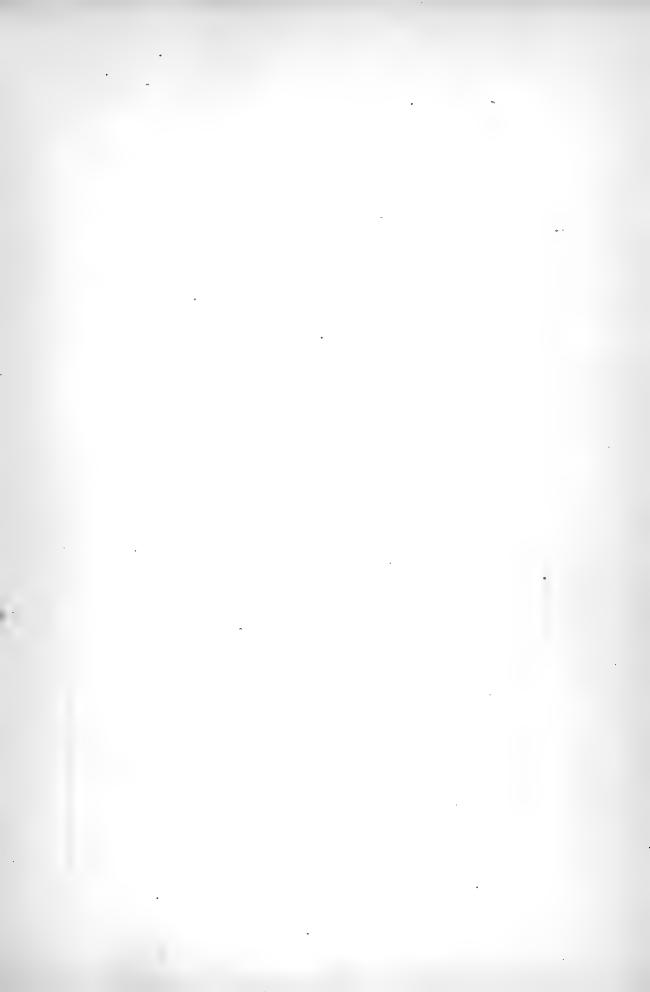
CLAUSINA, Jeffreys.

20. C. Ferruginosa, Forbes, (Kellia.)—Skye, Loch Fyne, etc., 30 to 100 fath., C. Concentrically ribbed, minute, oval.

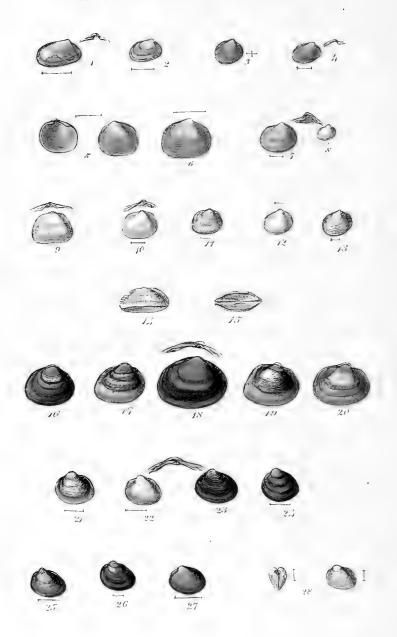
21. C. CROULINENSIS, Jeffreys.—Croulin Island, Shellands, R. Sub-

orbicular.

22. C. ABYSSLICOLA, Jeffreys.—Not ribbed, R.



RITISH SHELLS PL. VI.



G. B. Sewerby

PLATE VI.

MONTACUTA.

M. FERRUGINOSA, Mont. (Mya.)—M. oblonga, M. glabra, Tellimya elliptica, Erycina f.—S. Devon, Scarborough, Tenby, Cape Clear, etc., Mr. Wedge-shaped, long.

M. BIDENTATA, Mont. (Mya.)—Erycina, Petricola, and Tellinya b.
 —Newcastle, Weymouth, Dublin, etc. Burrows in dead shells,

Mr. Short, subquadrate.

3. M. SUBSTRIATA, Mont. (Mya.)—Erycina and Tellimya s.—Devon, Tenby, Durham, Zetland, Bantry Bay, etc., on spines of Spatangus, deep water, C. Minute, with diverging striæ.

TURTONIA.

4. T. MINUTA, O. Fabr. (Venus.)—Mya purpurea, etc.—Scarborough, Tenby, Cork, Oban, etc., C.

KELLIA.

- 5. K. SUBORBICULARIS, Mont. (Mya.)—Bornia inflata, Tellina and Tellinya s.—Anglesea, Portland, Zetland, etc., low-water to 60 fath., Mr.
- 6. K. LACTEA, Brown, (Tellimya.)—Brit. co. generally. More oblong than K. sub.
- 7, 8. K. RUBRA, Mont. (Cardium.)—Poronia r., etc.—Numerous localities; littoral, C.

LEPTON.

- 9. L. SQUAMOSUM, Mont.—Solen and Lutraria s.—Salcombe Bay, Tenby, Cork, etc., R. Flat, subquadrate.
- L. NITIDUM, Turt. (Kellia.)—Torbay, Skye, R. Less square and flat than L. squamosum.
- 11. L. CONVEXUM, Alder.—Bantry Bay, Rr. Convex, granulated.
- 12. L. CLARKIE, Clark.—Exmouth, Plymouth, Zetland, Rr. Minute, oval, smooth.
- L. SULCATULUM, Jeffr.—Annals, Feb. 1859. Guernsey, Mc. Concentrically wrinkled.

GALEONMA. Adheres to rocks by byssus.

14, 15. G. TURTONI, Sowb.—Channel Islands, and Exmouth. Oblong, gaping.

CYCLAS. Inhabits fresh-water.

16. C. CORNEA, Linn. (Tellina.)—Sphærium c., Scopoli, C. rivalis, etc.
—Ponds and ditches everywhere. Equilateral, subquadrate.

Fig. 17. C. PISIDIOIDES, Gray.—C. cornea, var., Brit. Moll.—Ditches and

ponds, C. Oblique, and light coloured.
18. C. RIVICOLA, Leach.—Cardium nux, etc.—Thames, etc. Large,

oval, wrinkled.

 C. CALICULATA, Drap.—C. lacustris, etc.—Newcastle, Bristol, etc., Mr. With a ridge at the apex.

20. C. LACUSTRIS, *Drap.*—pallida, Gray. — Regent's Park, etc., Mr. Oval, light.

PISIDIUM. Inhabits fresh-water.

21. P. OBTUSALE, Pfeiffer.—P. pusillum, var.?

22. P. PUSILLUM, Turton, (Tellina.)—Cyclas fontinalis and gibba.—In marshes and ponds at various places, C. Includes P. obtustale?

23. P. AMNICUM, Müller, (Tellina.)—T. rivalis, Cyclas palustris, C. obliqua.—British rivers, etc., generally. C. obliqua ribbed.

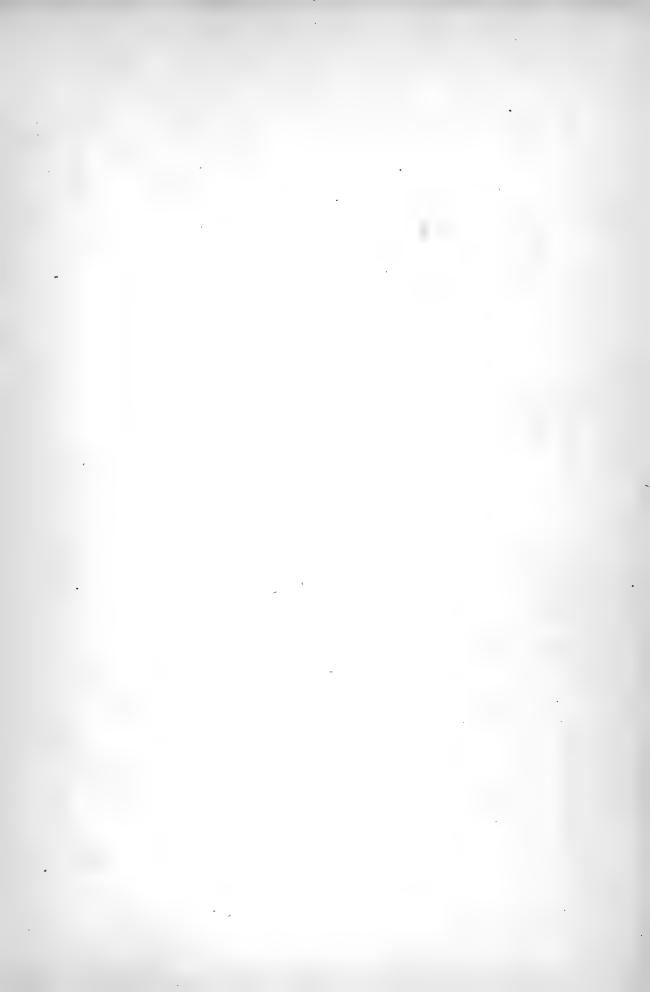
24. P. NITIDUM, Jennyns.—Battersea, Swansea, etc., C. Thick, dark, blunt.

25. P. Henslowianum, Sheppard, (Tellina.)—Cyclas appendiculata, P. acutum.—Cambridge, Swansea, etc., R. With a projection on the umbones.

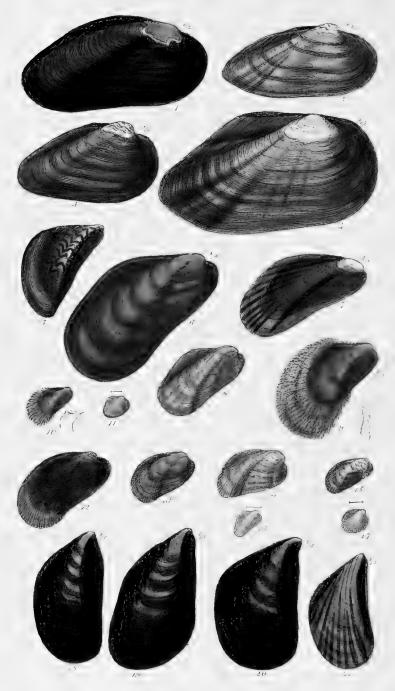
26. P. PULCHELLUM, Jennyns.—Cyclas fontinalis, etc.—Various localities, C. Ridged.

27. P. CINEREUM, Alder.—Cyclas c.—Various localities, Mc. Smooth.

28. P. ROSEUM, Scholtz.—Various loc., with P. pulchellum and P. nitidum, M. C. Subquadrate; animal pink.



BRITISH SHELLS PL. VII.



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PLATE VII.

Unio. Fresh-water Mussel with hinge-teeth.

1. U. MARGARITIFERUS, Linn. (Mya.)—Alasmodon m., A. arcuata, U. clongata, U. sinuata.—R. Conway; rivers in Cumberland, Wales, Ireland, etc., Mc. Long, thick, arched.

2. U. PICTORUM, Linn. (Mya.)—U. ovalis, U. rostrata, U. limosus, U. Deshayesii, etc.—Various British rivers, C. Long, oval, not

wedge-shaped behind.

3. U. TUMIDUS, Retz.—Mya and Unio ovalis, M. depressa, M. ovata, Myscei o., M. solida.—Thames, and various British rivers, C. More solid, deep, and wedge-shaped than U. pictorum.

ANODONTA. Fresh-water Mussel, without teeth.

4. A. CYGNEA, Linn. (Mytilus.)—M. anatinus, M. stagnalis, M. paludosa, Symphonota cy.—Britain and Europe generally, in rivers and canals, C.

Dreissina, Beneden.

5. D. РОLYMORPHA, Pallas, (Mytilus.) — London Docks, Edinburgh Canal, C.

Modiola, Lamarck.

6. M. Modiolus, Linn. (Mytilus.)—M. umbilicatus, M. curtus, M. vulgaris.—British coasts generally, C. Large, brown, not rayed.

7. M. OVALIS?, Sowb.—M. tulipa (radiata), var., Brit. Moll., now named provisionally. Less tumid, and with longer and more gradually sloped dorsal line than M. radiata, Rr.

 M. RADIATA, Hanley, Brit. Marine Conch. — M. tulipa, Brit. Moll., Mc. Tumid, radiated.

9. M. BARBATA, Linn. (Mytilus.)—M. Gibbsii.—Jersey, Torbay, Milford Haven, Youghal, R. as Brit. Barbs of epidermis serrated.

 M. PHASEOLINA, Philippi. — Guernsey, Falmouth, Scotland, Mc. Small barbs of epidermis not serrated.

11. M. CUPREA, Jeffreys, Ann. Nat. Hist. Jan. 1859.—In the stomach of a bird shot at Scarborough, Rr. Minute, rhomboidal, smooth.

CRENELLA, Brown.

 C. NIGRA, Gray, (Modiola.)—Mytilus and Modiola discrepuns, depressa, compressa, discors.—Scotland, R. Broad and compressed behind.

13. C. discors, Linn. (Mytilus.) - Modiola d. and discrepans. - Brit. co. generally, among seaweeds, C. Wedge-shaped and lobed.

14. C. MARMORATA, Forbes.—Mytilus and Mediola discors, discrepans, and tumida.—Brit. co. generally, Cc. Rhomboidal, marbled.

15. C. COSTULATA, Risso. — Exmouth, Cornwall, Swansea, Herm.

Wedge-shaped, marbled, strongly-ribbed.

16. C. RHOMBEA, Berkley, (Modiola.)—M. Prideauxiana.—Guernsey,

Torbay, Penzance, etc.; coralline, R.

17. C. DECUSSATA, Montagu, (Mytilus.) - C. and Modiola elliptica, cicercula, and faba.—Scarborough, and a few northern localities, 5 to 50 fath., Mc.; Norway, etc. Subquadrate, decussated, minute.

MYTILUS, Linn.

18. M. Edulis, Linn.—M. vulgaris.—Brit. co. generally, Cc. Byssal margin swelled.

19. M. UNGULATUS, Linn. Syst. Nat.—M. edulis, var. M. incurvatus (Hoof-Mussel).—Cornwall, Guernsey, etc., Mr. Byssal margin bent inwards, lower margin broad and straight.

20, 21. M. GALLOPROVINCIALIS, Lamk.—M. edulis, var. M. dilatatus?, M. pellucidus? (young, f. 21), M. subsaxatilis?—British Channel, etc., C. Dorsal margin dilated, beak advancing.



BRITISH SHELLS PL.VIII.

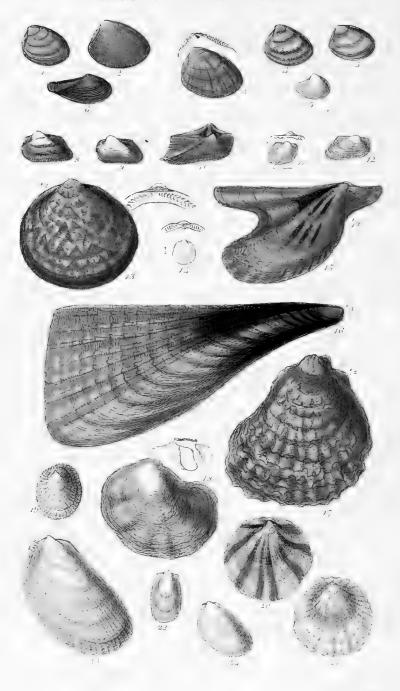


PLATE VIII.

NUCULA, Linn.

- Fig.
 1. N. NUCLEUS, Linn. (Arca.)—N. margaritacea, Glycimeris argentea.
 —Brit. co. generally, 7 to 90 fath., C. Thick, obtuse; beaks terminal
- 2. N. DECUSSATA, Sowerby.—N. sulcata, N. Polii.—Hebrides, Loch Fyne, Dublin Bay, 30 to 50 fath., Mr. Large, striated; beak not terminal.
- 3. N. RADIATA, Hanley.—N. and Arca nucleus and radiata.—Torbay, Milford Haven, Arran, etc., 10 to 70 fath., Mc. Prolonged anteriorly, rayed.

 N. NITIDA, Sowerby.—N. nucleus, var.—Numerous British loc., 1 to 35 fath., C. Shining, ends rather pointed.

5. N. TENUIS, Montagu, (Arca.)—North British co., 40 to 100 fath., sand, C. Thin, inner edge not crenated; beak terminal.

LEDA, Schum. Beaked behind.

L. CAUDATA, Donovan, (Arca.)—Arca and Nucula minuta and rostrata.—North co., C.; south co., R. 10 fath. to deep water. Ridged.

L. PYGMÆA, Munster, (Nucula.)—N. and L. tenuis, gibbosa, and lenticula.—Skye, Hebrides, Croulin Isl., 25 to 50 fath. Minute, smooth. Size (omitted) one-fifth of an inch.

ARCA, Linnaus.

8, 0. A. LACTEA, Linn.—A. barbata, A. Modiolus, A. crinita, A. perforaus, A. Gaimardii, var. f. 8; A. Quoyi, var. f. 9.—Penzance, Ilfracombe, Bantry Bay, Guernsey, etc. Adhering to shells and stones, 15 to 20 fath., C. Beaks approaching, radiately striated.

 A. TETRAGONA, Poli.—A. Noæ and imbricata.—Many Brit. loc., C. (12 to 50 fath.). Broad area between beaks.

11. A. RARIDENTATA, S. Wood.—A. pectunculoides.—Skye, Hebrides, etc., Scot. Cape Clear, 40 to 60 fath., Mr. Minute, teeth few.

12. A. NODULOSA, Ph.—E. Zetland, Shetland Isls., Rr.

PECTUNCULUS.

13. P. GLYCIMERIS, Linn. (Arca.)—A. and P. and Glycimeris pilosa, orbicularis, undata, and marmorata.—Brit. co. generally, 15 to 60 fath., C.

LIMOPSIS.

14. L. PELLUCIDA, Jeffreys, Ann. Nat. Hist. Jan. 59.—Dredged in sand at Guernsey, Rr.

AVICULA.

Fig.

15. A. TARENTINA, Lamk.—Mytilus and Avicula hirundo, etc.—Bantry Bay, Devon, etc., R.

PINNA.

16. P. PECTINATA, Linn.—P. fragilis, muricata, ingens, lævis, papyracea, rotundata, elegans.—Dorset, Milford Haven, Hebrides, Cape Clear; deep water, Mc.

OSTREA.

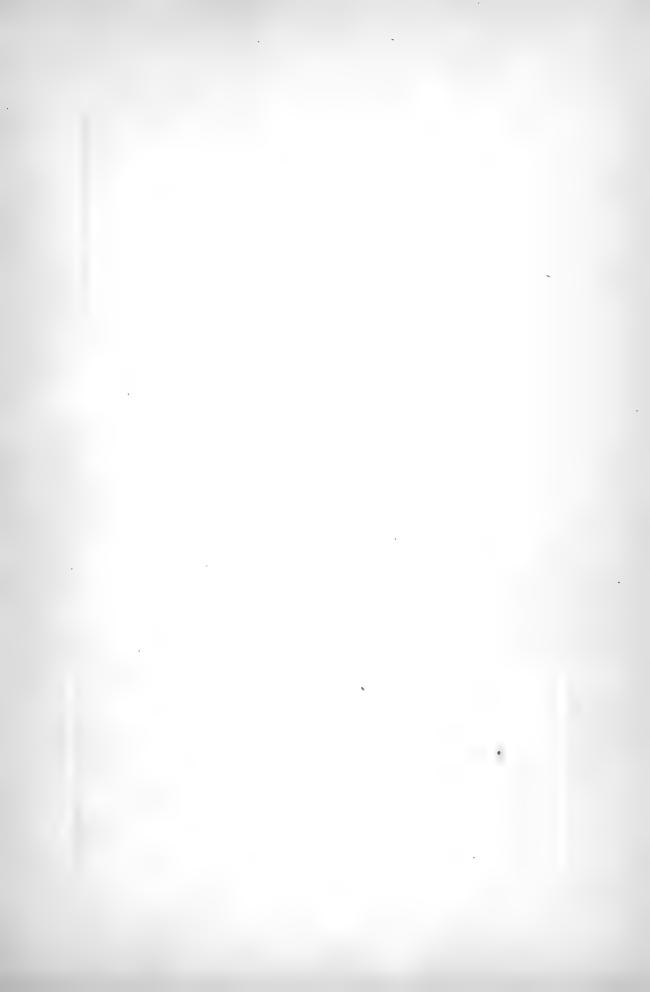
17. O. EDULIS, *Linn.—O. vulgare*, etc.—Various natural and artificial beds, in England, Scotland, and Ireland. The common Oyster.

Anomia.

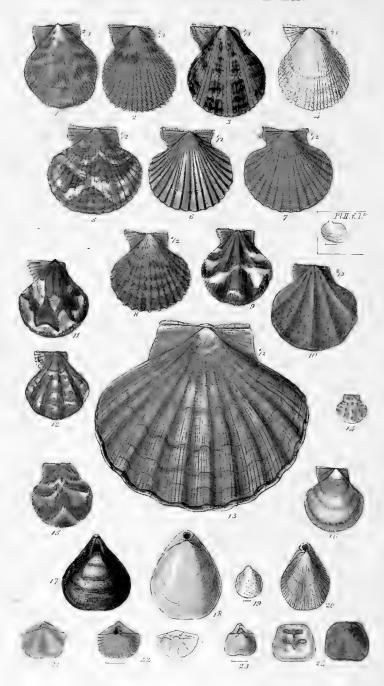
- 18. A. EPHIPPIUM, Linn.—A. electrica, A. squamula, cepa, etc.—Brit. co. generally, 1 to 30 fath., C. Pearly and irregular; beak marginal, curved.
- 19. A. ACULEATA, Müller.—A. striolata. Brit. co. generally, Mc. Small, with spinous sculpture.
- 20. A. STRIATA, Lovén.—Hebrides, R. Rayed, striated, with apex not marginal.
- 21. A. PATELLIFORMIS, Linn.—A. undulata.—Cape Clear, etc., 1 to 50 fath., Mr. Flat, ribbed.

LIMA.

- 22. L. SUBAURICULATA, Montagu, (Pecten.)—L. nivea, sulcata, etc.—Plymouth, Man, Zetland, Belfast, etc., Mr. Nearly straight.
- 23. L. HIANS, Gmel. (Vitraa.)—L. tenera, fragilis, aperta, etc.—Channel Isls., Penzance, Oban, Belfast, etc., Mc. Oblique, gaping at sides.
- 24. L. Loscombii, Sowerby.—Pecten and Ostrea and Lima fragilis and bullata.—Many Brit. loc., 10 to 50 fath., Mc. Oblique, closed at sides.



BRITISH SHELLS PL.IX.



G.B. Somert

PLATE IX.

Pecten. Free, except 1.

1. P. Pusio, Pennant, (Ostrea.) -P., O., and Hinnites distortus and sinuosus. — Brit. co. generally, 15 to 90 fath., C. Irregular, attached to stones, etc.

2, 3. P. Varius, Linn. (Ostrea.)—P. monotis.—Brit. co. generally, 3 to 35 fath.; C. Vertically elongate; auricles very unequal.

4. P. NIVEUS, Macgillivray. - Scotland, R. (15 fath.) Ribs more numerous than P. varius; white.

5, 6, 7. P. OPERCULARIS, Linn. (Ostrea.) -O., and P. subrufus, pictus, lineatus (var. f. 6), and sanguinea.—Brit. co. generally, 5 to 100 fath., C. As broad as long; ribs rounded.

8. P. Audouinii, Payraudeau.—P. opercularis, var., B. Moll.—Ribs

angular and squamose.

9, 10. P. DANICUS, Chemn.—P. and O. pes-felis, glaber, triradiata, adspersus, septemradiata, etc.—Several Scotch localities, 25 to 90 fath., Mc. Very variable, extreme vars. f. 9, 10. Auricles more equal than P. tigrinus.

11, 12. P. TIGRINUS, Müller.—P. obsoletus, domesticus, lævis, parvus, etc.—Brit. co. generally, 12 to 60 fath., C. Variable; one auricle

minute, the other large and ribbed.

13. P. MAXIMUS, Linn. (Ostrea.)—P. vulgaris.—Brit. co. generally, 3 to 40 fath. The common eatable Scallop. Valves unequal.

14. P. SIMILIS, Laskey.—O. and P. tumidus.—Fr. Forth, Isl. Man,

Lerwick, Cape Clear, etc., Mc. Minute, smooth, with undulating marks.

15. P. STRIATUS, Müller.—P. aculeatus, fuci, etc.—Scotland, C.; Eng-

land, R.

16. P. FURTIVUS, Lovén.—Zetland, Guernsey, etc., 40 to 50 fath., Mr. More rounded, and with auricles less broadly based than P. striatus.

HIPPOTHYRIS, Fixed by byssus.

17. H. PSITTACEA, Gmel. (Anomia.) - A. rostrum-psittaci, Chem.; Tercbratula psittacea .- Northumberland, Fr. Forth; deep water, Rr. as Brit. "The Parrot's-beak Anomia."

TEREBRATULA. Fixed by byssus.

18. T. CRANIUM, Müller.—Anomia c., and T. vitrea.—Zetland; deep water, unique as Brit. Smooth, oval.

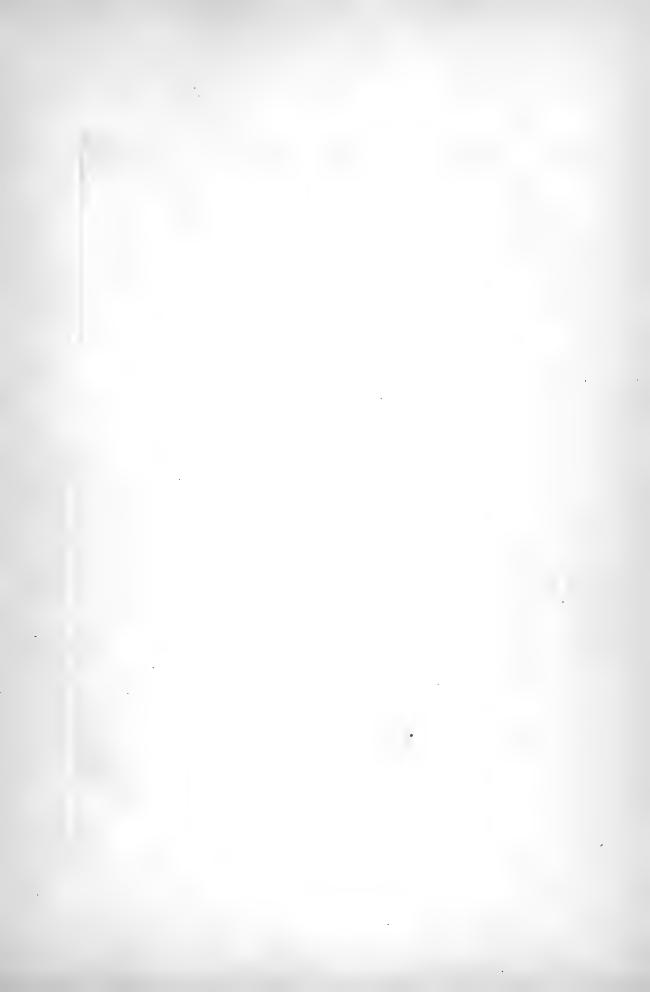
19. T. CAPSULA, Jeffreys, Ann. Nat. Hist., Jan. 1859.—Belfast Bay, R. Minute, punctured.

ARGIOPE, or MEGATHYRIS.

- 20. T. CAPUT-SERPENTIS, Linn. (Anomia.)—A. and T. retusa, pubescens, costata, and aurita.—Oban, Skye, etc., 20 to 50 fath., Mr. 21. A. CISTELLULA, S. Wood. (Terebratula.)—A. seminulum?, T. 22. A. DECOLLATA, Chemn.—A. detruncata.—Guernsey, R. 23. A. SEMINULUM, Philippi.—Croulin, near Skye, Jeffreys.

CRANIA.

24. C. Anomala, Müller. (Patella.)—Pat. Anomia, Discina, and Criopus distorta, ostreoides, personata, and rostrata.—Zetland, Arran, Lerwick, Cork, Mr.



BRITISH SHELLS, PL.X.

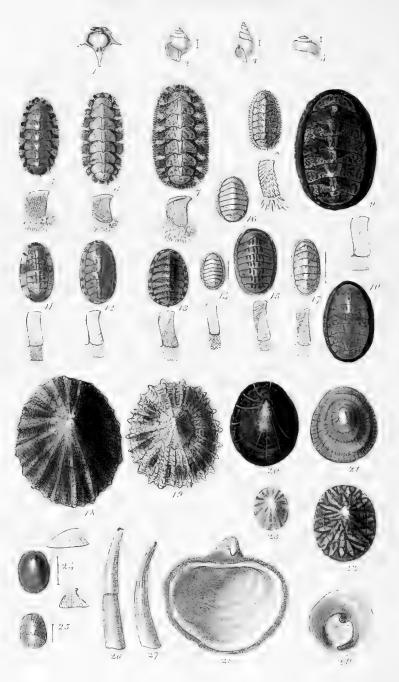


PLATE X.

HYALEA. Fam. Pteropoda.

Fig. 1. H. TRISPINOSA, Lesueur.—Once taken on floating timber, Dublin. Doubtful as British.

Spirialis, or Peracle. Fam. Pteropoda.

2. S. Flemingii, Forbes.—Fusus retroversus, Fl.—Zetland, Skye, Arran, Donegal, M. C. Snail-shaped.

3. S. Macandrei, F. and H.—Near Mizen Head, S. Ire., Rr.

4. S. Jeffreysh, F. and H.—Brit. Channel, Rr. Discoid.

Chiton. Sedentary on rocks.

5. C. FASCICULARIS, Linn.—Brit co. generally, Mc. Tufted margin, small, granules large.

3. C. GRACILIS, Jeffr. Ann. Nat. Hist., Jan. 1859. — Weymouth. Narrow; granules very small; two postero-terminal tufts.

7. C. DISCREPANS, Brown.—crinitus, Pennant?—Tenby, Guernsey, C. Tufted margin, large: granules very small.

8. C. Hanleyi, Bean.—Scarborough, Skye, W. Ireland, R. Spinose margin.

9, 10. C. MARMOREUS, O. Fabr.—C. latus, Lowe, C. lavigatus, ruber, and pictus. — Scarborough, Forth, Skye, Zetland, W. Ire., R. Margin smooth.

11. C. LEVIS, Pennant.—C. marginatus, Pult., C. Achatina, Brown. -Dorset, Devon; Brit. co. generally, but rare. Dorsally elevated; margin reticulated.

12. C. RUBER, Linn.—Brit. seas generally, Mr. Valves smooth; margin coriaceous.

13. C. CINEREUS, Linn.—C. marginatus, Penn. ?—Brit. co. generally, C. Valves carinated; margin and valves granulated.

14. C. Albus, Linn.—C. asselloides, Lowe.—Northern coasts, R. Marginal granules scaly and large; dorsal gr. smaller than C. cinereus.

15, 16. C. Assellus, Chemn.—C. minimus, Cinereus albus. — Brit. co. generally, C. Broad, granules on valves beaded.

17. C. CANCELLATUS, Sowerby. — C. albus, Pult. — Devon, Guernsey, Isl. Man, Oban, Zetland, Loch Carron, R. Narrow, back elevated, else like C. assellus.

Patella. (Limpet.) Sedentary.

18. P. VULGATA, Linn.—Brit. generally, Cc. Ribs not toothed.

Fig. 19. P. ATHLETICA, Bean.—Devon, Northumberland, etc., Cc. Ribs toothed.

20. P. PELLUCIDA, Linn.—P. lævis, cærulea, Acmæa pel.—British co. generally, C. smooth.

21. — var. lævis, Penn.

ACMÆA, OF LOTTIA.

22. A. TESTUDINALIS, Müller.—P. Clealandi.—North Ire., C. Oval, with tortoise-shell markings.

23. A. VIRGINEA, Müller,—P. parva, pulchella.—Brit. co. generally, Mc. Pale, pink-rayed, shallow.

PILIDIUM, OF TECTURA.

24. P. FULVUM, Müller.—P. Forbesii.—Clyde, Cork, Zetland, etc., R.

Propilidium.

25. P. ANCYLOIDE, Forbes.—Lamlash, Ayrshire, etc., R.

DENTALIUM, Linn.

- 26. D. Entalis, Linn.—Brit. co. generally, C. Smooth, small end notched.
- 27. D. TARENTINUM, Lamk.—D. vulgare, striatum, labiatum, politum, læve.—South coasts, C. Striated and entire at small end.

PILEOPSIS, or CAPULUS.

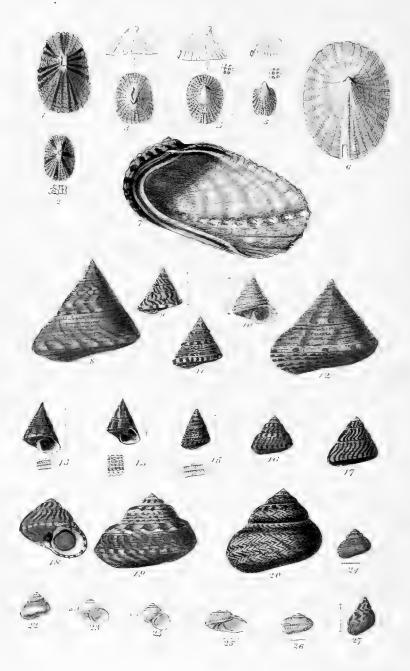
28. P. Hungaricus, Linn.—Fool's-cap Limpet.—S. Devon, and Br. co. generally, C.

CALYPTRÆA, Linn.

29. C. SINENSIS, Linn. (Patella.)—C. chinensis, albida, lævigata.—S. Brit., and Chan. Isls., R. With oblique septum.



BRITISH SHELLS, PL. XI.



G B S. . .

PLATE XI.

FISSURELLA.

Fig. 1. F. RETICULATA, Donov. (Patella.)—P. and F. Graca, apertura (young), cancellata, europæa.— Hebrides, Thanet, Devon, Ireland. On shells, etc., 1 to 15 fath., C.

2. F. COSTARIA, Deshayes.—Guernsey, R. More fine and numerous

ribs than F. reticulata.

PUNCTURELLA.

3. P. NOACHINA, Linn. (Patella.)—Cemoria Flemingii, Fissurella N., Rimula Flemingii, etc.—Scotland and Northumberland, 20 to 100 fath., R. With slit under apex.

EMARGINULA.

4. E. RETICULATA, Sowerby.—Patella fissura, etc.—Brit. co. generally, C. Conical, with slit in margin.

5. E. ROSEA, Bell.—E. pileolus, conica, capuliformis, etc.—Channel Isls., Exmouth, Cornwall, etc., 7 to 25 fath., Mc. Curved, coarsely cancellated. Red within.

6. E. CRASSA, Sowerby.—Loch Fyne, Oban and Belfast, 20 to 25

fath., Rr. Large, not cancellated.

Haliotis, or "Ear-shell."

7. H. TUBERCULATA, Leim.—H. vulgaris, Channel Isls., Cc.

TROCHUS.

- 8. T. ZIZYPHINUS, Linn.—C. conulus, C. discrepans, C. Lyonsii (white, ribbed var.), etc. Brit. co. generally, low-water to 50 fath., C.
- 9. T. CONULUS, Linn.—Lincolnshire, Rr. More simply conical than the most extreme forms of T. zizyphinus.
- T. ALABASTRUM, Beck.—T. formosus.—Zetland, Lerwick, etc., 45 to 80 fath., R. White, with deep, plain, and beaded ridges.
- 11. T. MILLEGRANUS, Philippi.—T. Clealandi, T. Martini.—Brit. co. generally, 15 to 90 fath., Mr. Granulated, whorls with prominent margin.
- 12. T. GRANULATUS, Born.—T. papillosus, T. fragilis.—Channel Isls., Weymouth, Dublin, etc., R. Like 8, but grained.
- T. STRIATUS, Linn.—T. parvus, etc.—S. Brit., C. More finely ribbed than T. exiguus.
- 14. T. EXIGUUS, Pult.—T. exasperatus, minutus, etc. S. co., C.

Fig. 15. T. Montagui, *Gray.—T. striatus*, Forbes.—Scarborough, Exmouth, Cape Clear, etc., C. Elevated, whorls tumid.

16. T. TUMIDUS, Mont.—T. patholatus, Rackettii, etc. Brit. co. generally, C. Short, whorls tumid, umbilicated.

17. T. CINEREUS, Linn.—T. lineatus, T. perforatus, etc.—Brit. co. generally, C. Littoral, small umbilicus.

18. T. UMBILICATUS, Mont.—T. cinerarius, etc.—Guernsey, S. and W. Brit. co., C. Littoral, umbilicus large.

19. T. MAJUS, Linn.—T. tuberculatus.—Brit. co. generally; littoral, C. Broad tuberculated Large unbilicus

Broad, tuberculated. Large umbilicus.

20. T. LINEATUS, Costa.—T. crassus, etc.—Channel Isls., Devon. W. Ire., Mc. Smooth, imperforate.

MARGARITA, or TROCHUS.

- 21. M. UNDULATUS, Sowerby.—Turbo carneus, M. striata, etc.—Scotland, 5 to 50 fath., Mc. Striated and undulated.
- 22. M. HELICINUS, Fabricius.—Turbo and Trochus neritoideus, margarita, M. vulgaris, etc.—Many Brit. loc.; littoral, C.
- 23. M. Pusillus, Jeffreys.—Lerwick, R., 10 to 40 fath. Minute, white, depressed.
- 24. M. EXILIS, *Phil.—Skenea Cutleriana*.—Guernsey, Skye, etc., R. Globose, striated.

Adeorbis.

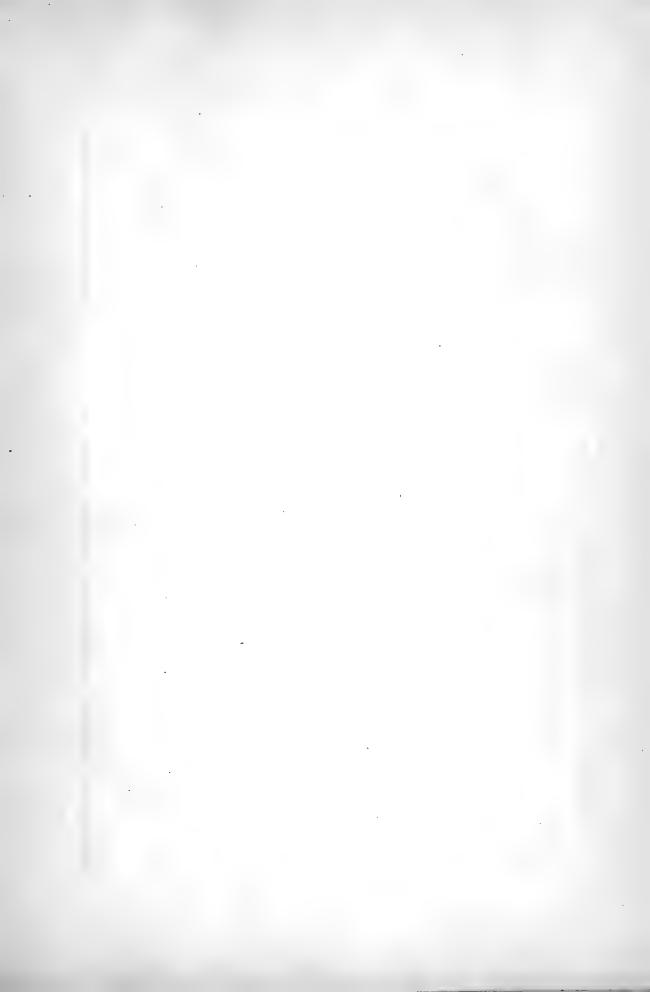
25. A. SUBCARINATA, Mont.—(Helix) Trochus rugosus, Cingula subc., etc.—S. Brit. co., Mr. Depressed, keeled.

Scissurella.

26. S. CRISPATA, Flem.—Zetland, etc., in sand, Mc.

PHASIANELLA.

27. P. Pullus, Linn. (Turbo.)—T. pictus, Cingula p., etc.—Brit. co. generally, C.



BRITISH SHELLS, PL.XII.



Garage Waller

PLATE XII.

IANTHINA. Floats on ocean.

1. I. communis, Lamk.—Helix Ianthina, I. fragilis, etc.—Cornwall, Bristol, etc.; oceanic, C. Sides depressed.

2. I. BRITANNICA, Leech. Reeve. - Ireland, Cornwall, etc., Mr. Darkly coloured, not compressed.

3. I. PALLIDA, Harvey.—I. patula.—Clare, Rr. as Brit.

4. I. EXIGUA, Lamk.—Cornwall, Clare, etc., Mr.

NERITINA. In rivers.

5. N. FLUVIATILIS, Linn.—N. fontinalis.—Thames, Trent, Humber, etc., Scotch lakes, Cc.

BITHINIA. In ponds.

6. B. Leachii, Shepp. (Turbo.)—B. ventricosus, Paludina acuta, similis, etc.—Rivers S. Brit., Mr. Narrow, with rounded whorls.
7. B. TENTACULATA, Linn. (Helix.)—T. nucleus, Paludina impura, etc.

-Fresh-water, throughout Brit. Oval.

PALUDINA. In ponds.

8. P. LISTERI, Forbes and Hanley.—Helix vivipara, etc.—Lakes and ponds generally, Mc. Whorls more separate, umbilicus larger than P. vivipara.

9. P. VIVIPARA, Linn.—Pal. achatina, etc.—Thames, etc., C.

VALVATA. In ponds.

10. V. PISCINALIS, Müller.—Nerita, Turbo, Cyclostoma fontinalis, obtusa, thermalis, etc.—Fresh-water, C. Subglobose.

11. V. CRISTATA, Müller. - V. planorbis, etc. - Many loc., Mc. Orbicular.

LITTORINA. On the sea-shore.

12, 13. L. Rudis, Donov. (Turbo.) — L. littoreus, etc., L. nigro-lineatus (var. f. 13).—British shores generally, Cc.

14, 15. L. LITTOREA, Linn. (Turbo.)—L. vulgaris, etc.—British shores generally. The common eatable Winkle.

16, 17. L. TENEBROSA, Mont. (Turbo). — British shores generally, C. Not thickened at bottom of mouth like L. rudis.

18. L. PATULA, Jeffreys.—L. labiata, L. jugosa, etc.—Common on our shores.

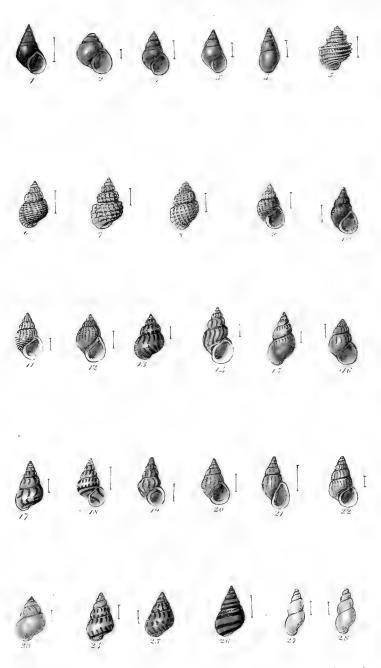
- 19. L. SAXATILIS, Johnston.—L. neglecta.—Probably L. patula var.?
- 20, 21. L. LITTORALIS, Linn. (Turbo.)—T. neritoides, T. ustulatus, etc. —Brit. co. generally. Depressed above. 22. L. Fabalis, Turt.—L. Beanii.—Young of L. littoralis?
- 23. L. NERITOIDES, Linn. (Turbo.)—T. petræa, L. cærulea, etc.—Kent, Sussex, etc., C. With white band.
- 24. L. PALLIATA, Say, (Turbo.)—Yarmouth, Mr.

LACUNA.

- 25, 26. L. PUTEOLUS, Turt. (Turbo.) Cochlea, Helix, and Nerita parva, fasciata, lacuna, rufa, etc.—Brit. shores, C. Globose.
- 27, 28. L. VINCTA, Mont. (Turbo.)—T. canalis, quadrifasciatus, etc.— Brit. co. generally, C.
- 29. L. CRASSIOR, Mont. (Turbo.)—L. pallidus,—Numerous Brit. co. Thick, conical.
- var.? of this rather than of C. vincta.
- 31. L. PALLIDULA, Costa, (Turbo.)—Brit. co. generally, C.
- 32. L. PATULA.—Fry of L. pallidula?



BRITISH SHELLS PLIXIN.



G B. Sowerby

PLATE XIII.

ASSIMINEA.

Fig. 1. A. Grayana, Jeffreys.—Limneus and Paludina G.—Greenwich and other marshes.

 A. LITTOREA, Delle Chiaje, (Helix littorina.)—Rissoa globularis and littorea.—On shore at Weymouth, Serk, Portland, Mr.

RISSOA, OF CINGULA.

- R. ULVE, Pennant, (Turbo.)—Helix, Cingula, Paludina, and Littorina.—In brackish water, on British shores, C.
- 3*. --- var. subumbilicata, R.
- 4. R. Barleei, Jeffreys.—R. ulvæ var.—Loch Carron, Skye, R.
- R. STRIATULA, Mont.—R., Turbo, Cingula, and Littorina carinata and monilis.—Devon, Margate, Galway, Herm, etc., 0 to 7 fath., Mr.; S. Eu. Carinated.
- 6. R. CIMICOIDES, Forbes.—R. sculpta.—W. Scotland. Like R. zet-landica, but with outer lip crenulated; finely decussated.
- R. ZETLANDICA, Mont. (Turbo.)—R., Cyclostoma, Cingula scalariformis, Cyclostrema z.—N. Scotland, 0 to 60 fath., Mc. Whorls angulated.
- 8. R. CRENULATA, Michaud.—Turbo and R. cimex and cancellatus.—
 Falmouth, Cornwall, Skye, Galway, C. Very coarsely cancellated.
- 9. R. CALATHUS.—Forbes and Hanley.—Sheerness, Whitesand Bay, 15 to 50 fath., R. Finely cancellated.
- R. Beanii, Hanley.—Cornwall, Plymouth, Orkney, Galway, C.;
 N. Eu. Striated.
- 11. R. ABYSSICOLA, Forbes.—N. Scotland; deep water, R.
- 12. R. LACTEA, Michaud.—Turbo cancellatus.—Jersey and Medit., Rr. Oval, plicated and striated.
- 13. R. PUNCTURA, Montagu. Turbo and Cingula and R. reticulata. —Brit. co. generally, 10 to 20 fath.
- R. COSTATA, Adams.—R., Turbo, Cingula plicata, costata, and exigua.
 —South co. Brit., S. Wales, Orkneys, Ireland, Channel Isls., 0 to 25 fath., C.
- R. STRIATA, Mont.—R., Turbo, and Cingula semicostata, minutissima, communis, gracilis, etc.—Brit. co. generally, N. and S. Eu.; littoral C.
- 16, 17, 18. R. PARVA, Costa.—T., C., and R. sublutea, lactea, alba, etc., R. interrupta (var. f. 17), R. Sarsii, var. f. 18 (unique).—Brit. shores generally, C.
- 19. R. COSTULATA, Alder.—Turbo variabilis, R. similis.—Devon, Channel Isls., W. Ireland, etc., C.; S. Eu.

Fig. 20. R. RUFILABRUM, Leach.—R. and C. hyalina and punctata.—Devon,

Belfast, etc., Mc.

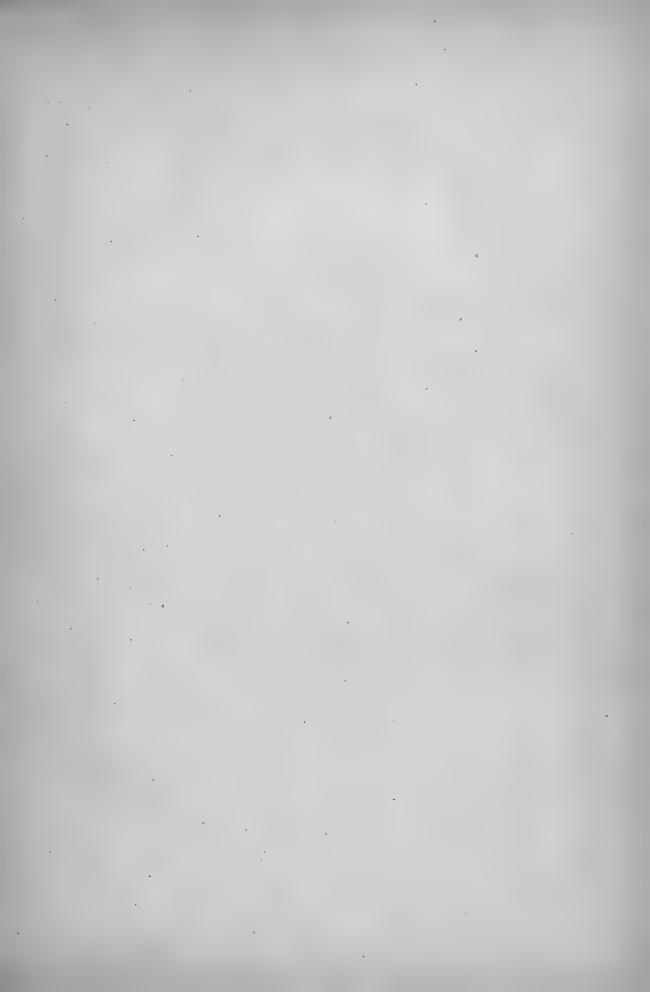
21. R. LABIOSA, Mont. (Helix.) — T., C., and R. membranacea and costata.—Brit. co. generally, C.

22, 23, 24, R. INCONSPICUA, Alder.—R. albula and supra-costata, var. f. 23, R. similis, var. 24, R. maculata.—Brit. co. generally, C. 25. R. SEMISTRIATA, Mont.—T. and R. pulchra and tristriata.—Brit.

shores generally, C.

26. R. CINGILLUS, Mont. (Turbo.)—R., T., and C. vittata, var., R. graphica and R. rupestris.—Brit co. generally.

27. R. VITREA, Mont. (Turbo.)—Helix glabrata, R. crystallina.—Exmouth, Oban, Birterbuy, etc., Mr. Elongated, smooth. 28. R. PROXIMA, Alder.—A rare Irish species. Elongated, striated.



BRITE H SHELLS PORTY.



PLATE XIV.

Risson,—continued.

Fig. 1. R. PULCHERRIMA, Jeffreys.—Channel Isls., R.

2. R. SOLUTA, Philippi.—Exmouth, Bute, Cork, etc., R. Like R. pulch., but with spiral striæ.

3. R. Alderi, Jeffreys, Annals, Aug. 1858.—Skye, Rr. Larger and more conical than R. soluta.

- 4. R. FULGIDA, Adams, (Helix.)—Turbo and Cingula f.—Weymouth, Arran, Cork, etc., Mr. Whorls rounded and banded.
- 5. R. ANATINA, Drap. (Cyclostoma.)—Paludina and Littorina a.— Very rare, Greenwich marshes.

6. R. Eximia, Jeffreys.—Chemnitzia Barleei, Clark.

7. R. VENTROSA, Mont. (Turbo.)—Cyclostoma, Paludina, and Cingula acutus, ventricosus, octona, stagnorum, etc.-Marine shores and brackish-water marshes, Mc.

8. R. DENTICULATA, Mont. (Turbo.)—Herm, Rr.

9. R. UNICA, (Turbo.)—Aclis u., Brit. Moll., Turritella, Pyramis, and Chemnitzia, R.—Devon, Cork, etc., Mr.

10. R. GLABRATA, Jeffreys.—N. sp.

11. R. CASTANEA, Jeffreys.—N. sp.

BARLEEIA.

12. B. Rubra, Flem. (Cingula.)—Turbo, C., and Rissoa ruber, unifasciatus, fulva.—Herm, Tenby, Dunbar, etc., S. Eu., Mr.

JEFFREYSIA.

- 13. J. DIAPHANA, Alder, (Rissoa.) R. glabra. Dublin, Swansea, Northumberland, etc.; littoral, R.
- 14. J. OPALINA, Jeffreys, (Risson.)—Channel Isls., R.

15. J. GLOBULARIS, Jeffreys.—Skye.

16. J. Gulsonæ, Clark, (Odostomia.)—Chemnitzia G.—Sandwith, Lerwick, Weymouth, etc., Guernsey.

EUOMPHALUS.

17. E. NITIDISSIMUS, Adams, (Helix.)—Skenea, B. Moll., Truncatella atomus.—Shetland to Channel Isls., Mc.

18. E. ROTA, Forbes and Hanley, (Skenea.) — Donegal, rare. Like a minute Ammonite.

SKENEA.

19. S. PLANORBIS, O. Fabr. (Helix.) — Turbo, Sk. depressa. — Brit. shores generally, on coastal Corallines, C. Flat, like a Planorbis.

Fig.

- 20. S. DIVISA, Flem. (Turbo.) Helix and Sk. serpuloides, Adeorbis striatus.—Scarborough, Weymouth, Orkney, Galway, etc., 7 to 25 fath., Mr. Striated.
- 21. S. COSTULATA, Möller, (Margarita.)—Loch Fyne, Rr.
- 22. S. LEVIS, Philippi, (Delphinula.)—Newcastle-on-Tyne, Rr.

ACLIS.

- 23. A. ASCARIS, Turt. (Turbo.)—Turritella, Alvania, and Pyramis supranitida and acutissima.—Ireland, Tenby, Zetland, Mr.
- 24. A. SUPRA-NITIDA, S. Wood (Alvania.)—Tenby, Dublin, etc., Rr.
- 25. A. NITIDISSIMA, Mont. (Turbo.)—Turritella, Pyramis, and Chemnitzia.—Falmouth, Burrow Isl., R.

EULIMELLA.

- 26. E. Scilla, Lovén, (Turbonilla.)—Eulima, Odostomia, Chemnitzia, and Eulimella crassula, and Macandræi.—N. Scotland, Croulin, etc., 20 to 90 fath., R.
- 27. E. ACIGULA, Philippi, (Melania.)—E., Chemn., Odost., and Eulima clavula.—Skye, Rr.
- 28. E. Affinis, Philippi, (Eulima.)—Pyramis, Odost., and E. gracilis, lævis.—Skye, Torbay, R.
- 29. E. CLAVULA, Lovén (Turbonilla.) Odostomia c. Torbay, Rr. Guernsey.
- 30. E. OBELISCUS, Jeffreys, Ann. Nat. Hist. Jan. 1858.—Shetland.



BRITISH SHELLS PL.XV.

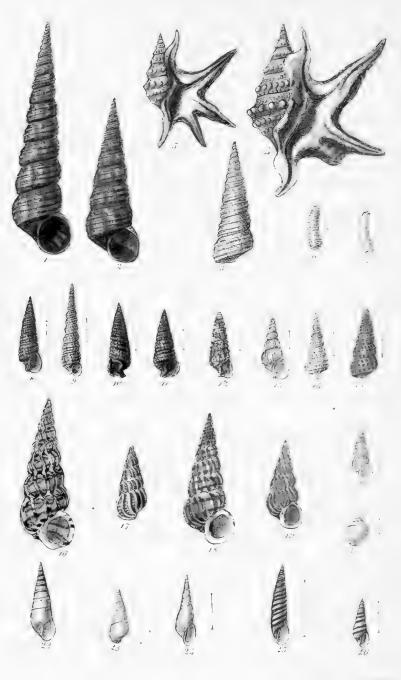


PLATE XV.

TURRITELLA.

Fig. 1. T. CORNEA, Lamk.—T. communis, var., B. M.—Cork and Zetland, Mr. Whorls less flat and less rapidly enlarged than T. communis. A white var. exists (T. nivea).

2, 3. T. COMMUNIS, Risso.—T. cornea?, T. Terebra. — Brit. co. generally; 4 to 100 fath., Cc. Aperture rather square.

Aporrhais.

4. A. PES-PELICANI, Linn. (Strombus.)—A. quadrifidus, Tritonium, and Rostellaria p.—Brit. co. gen.; N. and S. Eu.; 4 to 100 fath., C. Outer lip with one anterior lobe.

5. A. PES-CARBONIS, Brongniart. — Rostellaria and A. p., and serressiana.—Zetland, 70 to 100 fath., R. Outer lip with two anterior lobes.

CÆCUM.

6. C. TRACHEA, Mont. — Dentalium and Orthocera imperforatum, C. annulatus.—Devon, Weymouth, Scotland, Cork, etc., R.; S. Eu. Ringed and striated.

7. C. GLABRUM, Mont.—C., Dentalium, and Orthocera minutum, and lævissimum.—Exmouth, Weymouth, Swansea, Lerwick, Bantry Bay. Rare, smooth.

CERITHIUM.

8. C. RETICULATUM, Costa, (Strombiformis.) - Murex and Terebra r. -Brit. co. gen., 0 to 20 f., C. Narrow, and closely reticulated.

9. C. METAXA, Delle Chiaje.—C. angustissimum. — Guernsey, R.; S.

Eu. Lengthened, white.

10. C. ADVERSUM, Mont. (Murex.)—C., Triphoris, Turbo, and Terebra a., perversus, and reticulatus.—W. and S. Brit., Channel Isls., etc., 5 to 25 fath., Mr.

CERITHIOPSIS.

11. C. TUBERCULARE, Mont. (Murex.) — Cerithium and Terebra t.— Three rows of tu-Brit. co. gen.; S. Eu.; 4 to 40 fath., Mc. bercles in the penultimate whorl.

12. C. CLARKII, Hanley.—Exmouth, Rr. Two rows of tubercles. 13. C. NIVEA, Jeffreys, Ann. Nat. Hist. 1859.—In shell sand, Belfast,

R. Rather Buccinum-shaped.

14. C. METULA, Lovén, (Cerithium.)—C. nitidum, Forbes.—Zetland, 50 to 80 fath., R. White, with angular whorls.

15. C. PULCHELLA, Jeffreys. -- Falmouth, Plymouth, Guernsey, R. Closely whorled and cancellated.

SCALARIA.

16. S. COMMUNIS, Lamk.—Turbo and Strombiformis clathrus and clathratus.—S. co. principally, C. Laminarian zone, S. Eu. Ridges raised; whorls separated.

17. S. GRENLANDICA, Chemn. (Turbo.)—S. planicostata, subulata.—Frag-

ments only, N. Scotland, N. Eu. Grooved between ridges.

18. S. Turtonis, *Turton*.—Scarborough, Exmouth, Cork, etc., N. and S. Eu., R. as Brit. Ridges flat.

19. S. Trevelyana, Leach.—N. Brit., 15 to 85 fath., Mr. Thin, with ribs narrower than Sc. Turtonis.

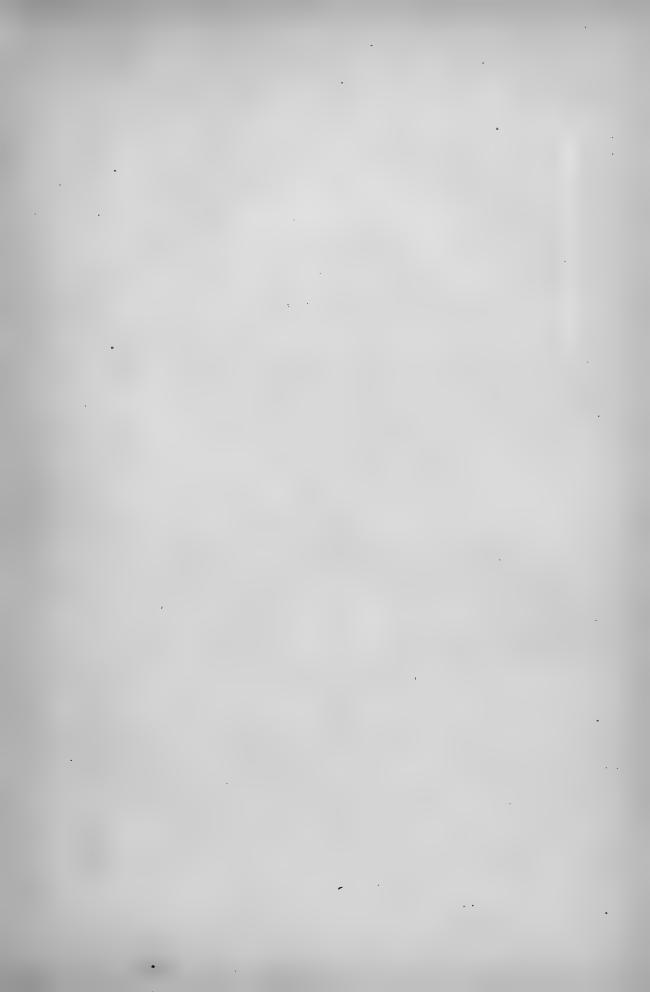
20. S. CLATHRATULA, Mont.—S. Brit. and Channel Isls., Mr. Small, white, with thin ribs.

STYLIFER.

21. S. Turtoni, Brod.—Phasianella stylifera, Velutina s., S. globosus and astericola.—On spines of Echinus sphara, Torbay and Berwick, R. Glassy, thin.

EULIMA.

- 22. E. POLITA, Linn. (Helix.)—Strombiformis, Turbo, Rissoa, and Phasianella p. and albus, Boscii and anglica.—Ireland, S. Brit., E. Scot., N. and S. Eu., 7 to 50 fath., Mr. Rather solid.
- 23. E. DISTORTA, Deshayes.—Brit. co. gen., Mc.; 12 to 90 fath.; N. and S. Eu. Small, tortuous.
- 24. E. STENOSTOMA, Jeffreys, Ann. Nat. Hist. 1858.—Zetland and Norway, Rr. Thin, with rapidly increasing whorls.
- 25. E. Subulata, Donov. (Turbo.)—Strombiformis, Helix, and Melania s. and glaber, trifasciatus, Donovani, and lineata.—S. and W. Brit., Ire., Zetland, Medit., 10 to 80 fath., Mr. Whorls deep,
- 26. E. BILINEATA, Alder.—Or E. subulata, var.—Northumberland, etc. Whorls more swelled than E. su., two-banded.



BRITISH SHELLS PL.XVI.



G. B Sowerler

PLATE XVI.

CHEMNITZIA.

- 1. C. ELEGANTISSIMA, Mont. (Turbo.)—T. lacteus, Linn.?, T. acutus. -Brit. co. generally; not deep, C. Interstices of longitudinal ribs smooth.
- 2. C. SIMILLIMUS, Mont. (Turbo.)—C. gracilis, Phil. More slender and minute than f. 1.
- 3. C. PUSILLA, Phil. Moll. Sic. 2. p. 224. pl. 28. f. 21.—More stout than f. 1, with the ribs straight and broad. Medit., Brit.?
- 4, 5. C. RUFA, Phil,—And var. C. fulvocincta (f. 5).—Brit. co. generally, 15 to 50 fath., Mc. Spiral grooves between ribs.
- 6. C. formosa, Jeffreys, (Odostomia.) Swansea, Shellness, Bantry Bay, etc., Mr. Grooved between ribs, excavated at suture.
 7. C. FENESTRATA, Forbes and Jeffr. (Odostomia.)—Torbay, etc., R.
- With pits between spiral ridges.
- S. C. RUFESCENS, Forbes.—Odostomia and Turritella indistincta and scalaris.—Clyde, Hebrides, Oban, 15 to 50 fath., R. More stout than C. rufa. Three-banded.
- 9. C. SCALARIS, Philippi, (Melania.)—Exmouth, Guernsey, Medit., R. Ribbed; whorls angular above.
- 10. C. CLATHRATA, Jeffreys.—Birterbuy Bay, R. Lower part of whorls spirally grooved between ribs.
- 11. C. INDISTINCTA, Mont. (Turbo.) Odost., Turritella, Terebra, and Pyramis truncata and speciosa, etc.—Brit. co. generally, 5 to 40 fath., Mr.; S. Eu. Ribs curved, striated between.

TRUNCATELLA.

12. T. SUBCYLINDRICA, Linn. (Helix.)—T. Montagui, Turbo truncatus, subtruncatus, Cyclostoma truncatulum, Turritella t. and s., etc.-Weymouth, S. Devon, Scarborough, etc., C.

NATICA.

- 13. N. Helicoides, Johnston.—Scotland, Scarborough, etc., 15 to 40 fath., R.; N. Eu. Thin-grooved suture.
- 14. N. Montagui, Forbes.—Nerita rufa, Natica r. and rutilla.—Principally northern loc. In sand and gravel, 12 to 90 fath., Mr. Small, stout.
- 15. N. Kingii, Forbes and Hanley.—Northumberland, unique, Jef-
- freys coll.

 16. N. NITIDA, Donovan.— Nerita and Natica catena, nitida, Alderi, glaucina, etc.—Brit. co. generally, 4 to 90 fath., C. Oblique, marked with undulating lines.

- 17. N. Monilifera, Lamk. Nerita glaucina, catena, etc.—Near water-mark, in sandy places generally, C. Whorls rounded.

 18. N. SORDIDA, Phil.—N. fulva, plumbea, etc.—Scilly, Cape Clear,
- Zetland, etc., 25 to 90 fath., R.
- 19. N. Pusilla, Say.—N. Granlandica, livida, alba.—Northumberland, Yorkshire, N. Eu., 45 fath., R. White; umbilicus small.

RECLUZIA.

20. R. APERTA, Jeffreys.—Natica aperta, Lovén?—Zetland, Rr.

VELUTINA.

- 21. N. LÆVIGATA, Linn. (Helix.) Bulla, Velutina, etc. Brit. co. generally, 1 to 30 fath., N. Eu., C.
- 22. N. FLEXILIS, Mont. (Bulla.)—Coriocella and Sigaretus plicatilis.— N. Scot., 25 fath., Rr.

LAMELLARIA.

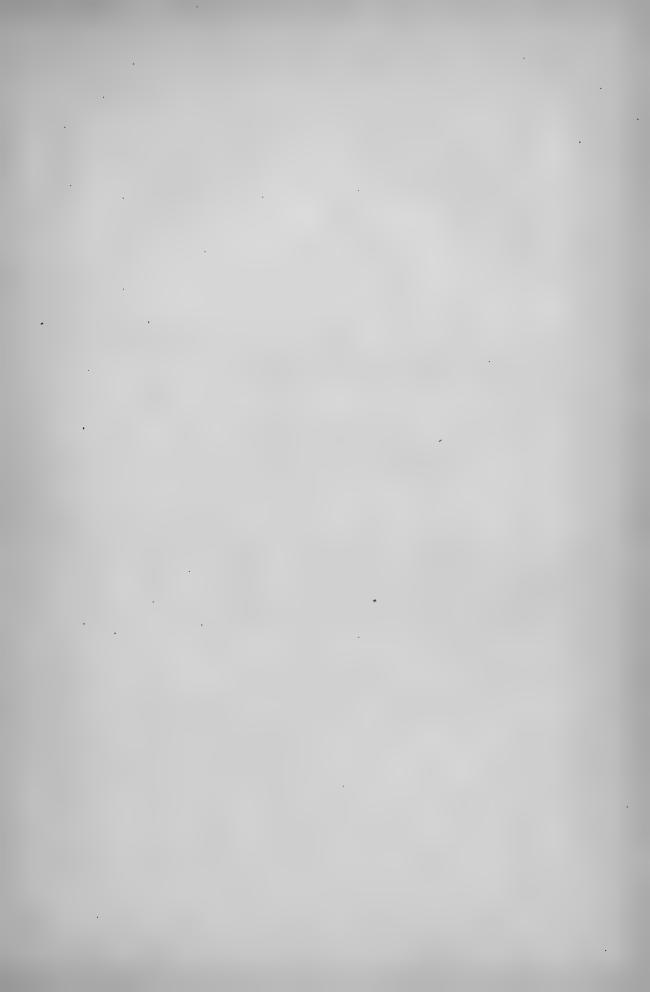
- 23. L. Perspicua, Linn,—Helix, Bulla haliotoidea, Sigareta and Coriocella neritoideus.—Brit. co. generally, but R.; 1 to 15 fath., Mr. Thin, glassy, more ventricose than L. tentaculata.
- 24. L. TENTACULATA, Mont.—Sig. and Cor.—Falmouth, Swansea, Arran, etc. Laminarian, Mr. Upper whorls less full than L. perspicua.

OTINA,

25. O. otis, Turt. (Helix.)—Velutina, Galericulum ovatum.—Wales, Devon, Channel Isls., Clare, etc., Mc. Littoral.

TRICHOTROPIS.

26. T. BOREALIS, Broderip and Sowb.—T. and Murex carinatus, umbilicatus, acuminatus, etc.—N. Scotland, W. Ireland, 15 to 80 fath., R.



BRITISH SHELLS PL. XVII.



G. B. Sowerby

PLATE XVII.

ODOSTOMIA.

1. O. UNIDENTATA, Mont. (Turbo.)—Voluta u., O. plicata.—Brit. co. generally, Mc. Rather conical. Tooth strong; no epidermis.

2. O. TURRITA, Hanley, Brit. Mar. Conch. - O. unidentata, var. B. M.—R. More lengthened than No. 1.

3, 4. O. Acuta, Jeffreys. — Torbay, Loch Fyne, Galway, etc., Mc.

Strong, conical. Suture deep.

- 5. O. PLICATA, Mont. (Turbo.) Voluta p., V. plicatula, O. Anna, Jaminia p., etc., Mc.—Salcombe, Swansen, Dublin, Aberdeen, Mc. Turreted. Narrow, thin.
- 6. O. INSCULPTA, Mont. (Turbo.) Voluta, Jaminia, and O. ins.-S. Devon, Oban, Hebrides, etc., R. Conical, spirally striated.

7. O. Pallida, Mont. (Turbo.) - Fol., Cingula, Phasianella p., O. ambigua.—S. Devon, Rr. Broad. Thin, pillar straight.

- 8. O. CONOIDEA, Brock.—Turbo, Odost., etc.—N. Scotland, Mc. S. Devon, Mr. N. and S. Eu. White. Whorls straight; throat striated.
- 9. O. CONSPICUA, Alder.—Isl. Man, Whitburn, Herm. Coloured. Whorls rounded; throat striated.

10. O. TRUNCATULA, Jeffreys.—Plymouth. Elongated.

11. O. CYLINDRICA, Alder. — Turbo nivosus?—S. Devon, Ilfracombe,

Guernsey, Cork, R. Cylindrical, few whorls.

12, 13. O. EULIMOIDES, Hanley.—O. crassa, O. pallida (var. f. 13), O. notata.—Brit. co. generally. Coralline zone, Mr. Ample body-whorl.

14. O. Dubia, Jeffr.—S. Devon, Lerwick, Guernsey, Mr. Rather large body-whorl.

- 15, 16. O. Alba, Jeffreys, (and var.)—Swansea, Skye, Zetland, Guernsey, Mr. Thin, whorls rounded.
- 17. O. NITIDA, Alder.—S. Devon. Littoral, Mc. Aperture differently formed from No. 17.
- 18. O. Lukisii, Jeffreys, Ann. Nat. Hist. 1859.—Guernsey. Sublittoral and coralline, Mc. Whorls tumid; a slight umbilicus.
- 19. O. GLABRATA, Muhlfeldt, (Helix.)—Rissou punctulum, etc.—Zetland, R. Pillar-lip thin, arched.
- 20. O. RISSOIDES, Hanley.—O. scalaris.—Channel Isls., Devon, Cornwall, Tenby, etc., Mc. Thin, conical, no umbilicus.
- 21. O. ALBELLA, Lovén. O. rissoides, var., B. M. Guernsey, S. Devon, etc. Turreted, upper whorls more cylindrical than
- 22. O. OBLIQUA, Alder.—Tynemouth, Guernsey, 7 fath. to deep water, Rr. Thin, oblique.

Fig.

23. O. DIAPHANA, Jeffr. Ann. Nat. Hist. New Ser. vol. ii. p. 341.—R. Manifestly distinct from No. 22.

24. O. STRIALATA, Alder. — Northumberland, Rr. Conical, striated.

25. O. MINIMA, Jeffreys, Ann. Nat. Hist. Jan. 1, 1858.

26. O. INTERSTINCTA, Mont. (Turbo.)—T., O., Voluta, and Jaminia canaliculata, oblonga, and obtusa.—Brit. co. generally. Shallow water, C. With longitudinal ribs.

27. O. Dolloliformis, Jeffr.—Scarborough, Exmouth, Swansea, Tenby,

Rr., Scotland. Oval, body-whorl very tumid.

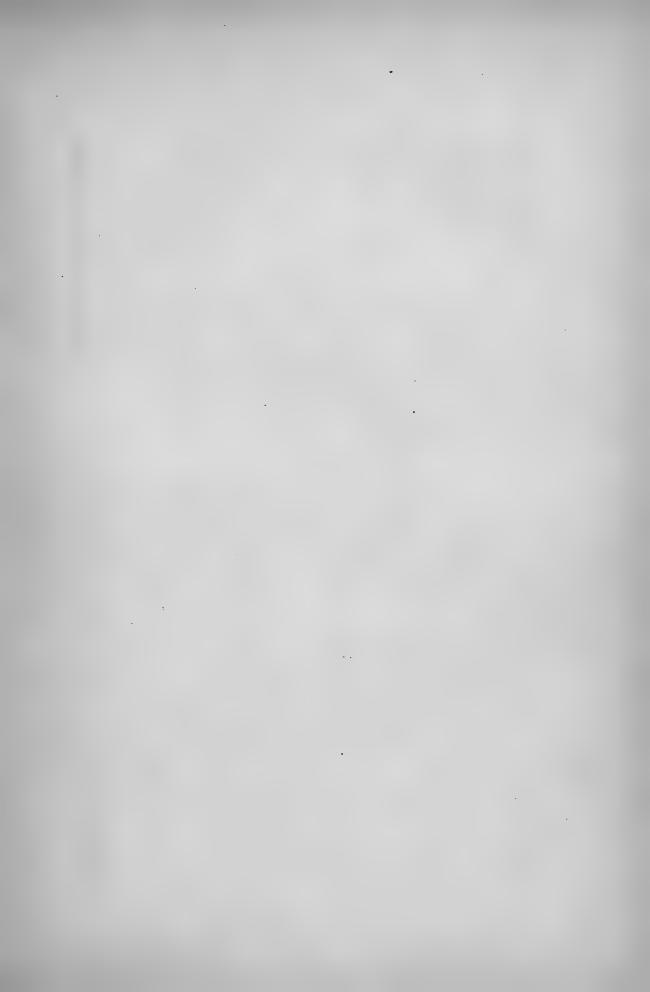
28. O. WARRENII, Thompson, (Rissoa.)—Turbonilla and O. obliqua, O. decorata.—Dublin, S. Devon, W. Scotland, R. Turreted. Mouth oblique; an umbilicus; no fold or columella.

29. O. SPIRIALIS, Mont. (Turbo.)—Voluta and Rissoa s., pellucida, and plicatula.—Brit. co. generally, not deep, Mc. Whorls ribbed

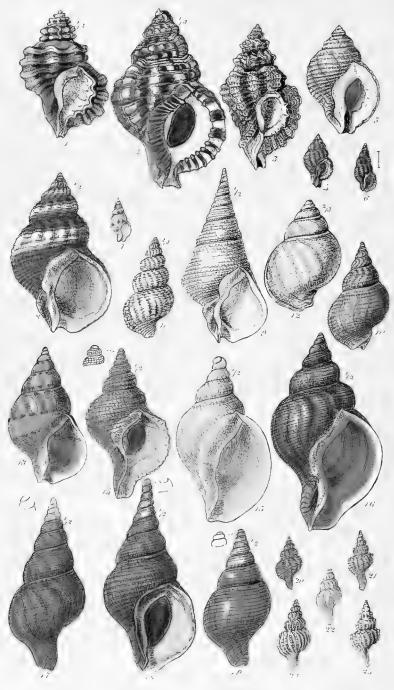
longitudinally above, spirally beneath.

30. O. DECUSSATA, Mont. (Turbo.)—T. Helix, Rissoa and O. arenaria, pellucida?, and d.—Exmouth, Lerwick, etc., R. Ribbed and spirally striated.

31. O. EXCAVATA, *Phil.* (*Rissoa.*)—*R.*, *O.*, and *Cingula Harveyi* and *Deshayesiana.*—Dublin, Arran, Guernsey, R. Largely sculptured.



BRITISH SEELLS PL.XVIII.



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PLATE XVIII.

TRITON.

1. T. CUTACEUS, Linn.—Channel Isls., Rr. as Brit. Mr. Lukis's specimen taken living off Guernsey.

2. T. NODIFERUS, Lamk. - Guernsey; three living specimens, one incrusted with Lepralia coccinea (truly British). Mr. Jeffrey's specimen reduced.

MUREX.

3. M. ERINACEUS, Linn.—Purpura scalata, var. M. Tarentinus.—Brit. co. generally; 5 to 30 fath., C. N. and S. Eu.

4. M. CORALLINUS, Scacchi.—Fusus and M. lavatus, inconspicuus, gyrinus, and badius?—Channel Isls. and S. Eu., C. M. Rudis. See Trophon.

PURPURA.

5. P. LAPILLUS, Linn. (Buccinum.)—B. and P. filosum, imbricatum, and bizonalis.—In crevices on shores, Brit. co. generally, N. and S. Eu., C.

LACHESIS.

6. L. MINIMA, Mont. (Buccinum.)—B. brunneum, B. rubrum, Nesæa granulata, mamillata, Fusus minimus, etc.—Channel Isls. and S. Brit., on shores. S. Eu.

Buccinum.

7. B. Holbolli.—Mangelia H.—Cornwall, Rr.

8. B. UNDATUM, Linn.—B. striatum, anglicanum, pyramidale, imperiale, etc.—Brit. co. generally, shores, Cc. N. Eu. and Am.

9. B. ACUMINATUM, Brod.—B. undatum var., B. M.—Rr.

10. B. CILIATUM, Fabr. (Tritonium.)—Shetland, deep water, R. More thin than No. 9; with strize finer, and hairs of epidermis tufted minutely.

11. B. fusiforme, Brod.—Cork, Wexford, Rr. Turreted, fusiform, white, ribbed, striated.

12. B. Dalei, Sowerby.—B. ovum, Halia Flemingiana. — Torbay, Northumberland, Aberdeen, etc., R. Ventricose.

13. B. Humphreysianum, Bennett.—Tritonium H.—Cork, Skye, Bantry Bay, R. Light, smooth.

Fusus.

14. F. Berniciensis, King. - Northumberland, Rr. Carinated, with open pink mouth.

Fig. 15. F. Norvegicus, Chemn. (Strombus.) — Tritonium n.—Scarborough,

Durham, Rr. Oval, smooth, with large aperture.

16. F. ANTIQUUS, Linn. (Murex.) - M., B., and Tritonium despectus, contrarius, carinatus, babylonicus, etc.-Various Brit. co., 5 to 30 fath., C.

17. F. Islandicus, Chemn.—Murex corneus, Tritonium gracile, etc.— Brit. co. generally; 5 to 80 fath.; N. Eu., C. (See F. propinguus.)

18. F. Turtoni, Bean.—Yorkshire, Northumberland, 60 fath., Rr.

19. F. PROPINQUUS, Alder.—F. corneus and islandicus, var.—N. Scotland, Bantry Bay, Northumberland, deep water, Mr. Shorter than F. islandicus, with deep suture and symmetrical spire.

TROPHON.

20. T. Rudis, Phil. (Fusus.)—Murex r., Jeffreys.—Tenby; unique as British. Whorls and ribs rounded.

21. T. MURICATUS, Mont.—Fusus and Murex m.—Brit. co. generally, Channel Isls., 15 to 50 fath., Mr. Whorls angular, ribs inter-

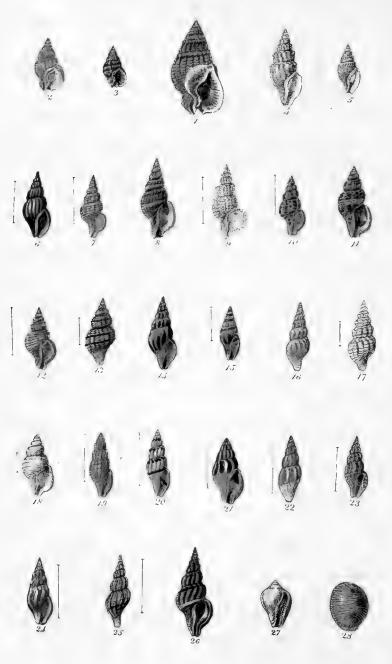
22. T. SCALARIFORMIS, Gould.—Belfast, in sand, Rr. Ribs smooth.

23. T. CLATHRATUS, Linn. (Murex.)—Tritonium, Fusus, and Pleurotoma Bamfius.—Irish sea, Zetland, Mc. Ribs laminated.

24. T. BARVICENSIS, Johnston.—Fusus and Tritonium b.— Hebrides, Cork, Northumberland, 60 fath., Mr. Ribs aculeated.



BRITISH SHELLS, TL. XIX.



G.B. Sowerby.

PLATE XIX.

NASSA,

Fig.

1. N. RETICULATA, Linn. (Buccinum.)—N. pullus, Tritonium r.—Brit. and Eu, co. generally. Littoral, Co.

2. N. INCRASSATA, Müller, (Bucoinum.)—N. and B. minutum, macula, asperulum, etc.—Brit. shores generally, 0 to 50 fath., gravel, C.

3. N. PYGMÆA, Lamk. (Ranella.)—B. tuberculatum, Tritonia varicosa, etc.—S. Brit. co., S. Eu., 4 fath, to deep water, C. Small, with white varices on the body.

MANGELIA.

4. M. TURRICULATA, Mont. (Murex.) -Bela, Fusus, and Pleurotoma angulatus, etc.—Brit. co. generally, 3 to 100 fath., N. Eu., C. Whorls flat above.

5. M. TREVELLIANA, Turt.—Pleurotoma, Bela, and M. reticulata, decussata, and leucostoma.—Northumberland, Aberdeen, Zetland, etc., 15 to 40 fath., R. Whorls with angular slope above.

6. M. RUFA, Mont. (Murex.) - F., M., and B. chordula, Ulideana

(var.), etc.—Brit. co. generally, Mc.

7. M. TERES, Forbes, (Pleurotoma.)—P. boreale.—Various loc., 15 to 50 fath. S. Eu., Mr. Carinated, aperture deeply notched.

8. M. PURPUREA, Mont. (Murex.) - Fusus and Pleu. p., Philberti versicolor and variegatum.—Brit. co. gen., 3 to 60 fath., C. S. Eu.

9. M. CANCELLATA, Sowerby (Fusus.)—M. purpurea var., F. asperrimus.—Cornwall, Cork, R. Sharply sculptured.

- 10. M. RETICULATUM, Brown, (Pleurotoma.) M. cancellata var. Shetland, Guernsey, Rr. Sculpture between 8 and 9; inner lip not thickened.
- 11. M. Leufroyi, Michaud, (Pleurotoma.)-P., F., and M. inflata, Boothii,—Arran, Orkneys, Guernsey, etc.; S. Eu., 5 to 50 fath.,
- 12. M. LINEARIS, Mont. (Murex.)—M., Pl., Fus. elegans, concinna, etc.—Brit. co. generally, sand and shells, 1 to 80 fath., C.
- 13. M. SCABRA, Jeffreys, (Pleur.)—M. linearis var.—Guernsey, Plymouth, R.
- 14. M. NEBULA, Mont. (Murex.) M., P., and F. Bertrandi, varians, and pyramidatus.—Various places and depths, N. and S. Eu., C. 15. M. LÆVIGATA, Phil. (Pleu.)—M. nebula var.—South Brit., S. Eu.
- Small, fusiform, shiny, banded.
- 16. M. GUINNIANA, Phil. (Pleu.) M. nebula var. Tenby, etc., Mr. S. Eu. Whorls longer than No. 14.
- 17. M. BRACHYSTOMA, Phil. (Pleu.) M. tiarula and Clavatula b .-Brit. co. gen., Mr. Turreted; ribs crossed by raised lines.

Fig. 18. M. NANA, Lovén, (Tritonium.) — Fusus albus.—Lerwick, Zetland, Orkneys, etc., 45 fath., and deep, R. Ventricose, cancellated.

19, 20. M. STRIOLATA, Scacchi, (Pleu.)—P. and Murex Smithii, Farranti.—S. Devon, Clyde, Guernsey, Bantry, etc., Medit., R. as

Brit. Ribs angularly curved above.

21, 22. M. costata, Pennant, (Murex.)—Buccinum, Fusus, Pl. c., etc.; var. f. 22, M. Metcalfei.—Brit co. generally, 5 to 50 fath., N. and S. Eu., C. Body-whorl larger than No. 24.

23. M. COARCTATA, Forbes.—Pl., M. costata var., B. M.—Distribution

as 21 and 22; not so common.

24. M. SEPTANGULARIS, Mont. (Murex.)—M., F., and Pl. costatus, hep-tagona, etc.—Torbay, Bristol Channel, Forth, Galway, 5 to 30 fath., Mc.

25. M. ATTENUATA, Mont. (Murex.)—M. aciculatus, Pl. gracilis, Villiersii, etc.—S. Devon, Oban, Hebrides, Cork, etc., Mr. S. Eu.

26. M. GRACILIS, Mont. (Murex.)—M. emarginatus, suturalis, elegans, etc., S. Brit., Galway, S. Eu., Mr. M. Holbollii. See Buccinum.

ERATO.

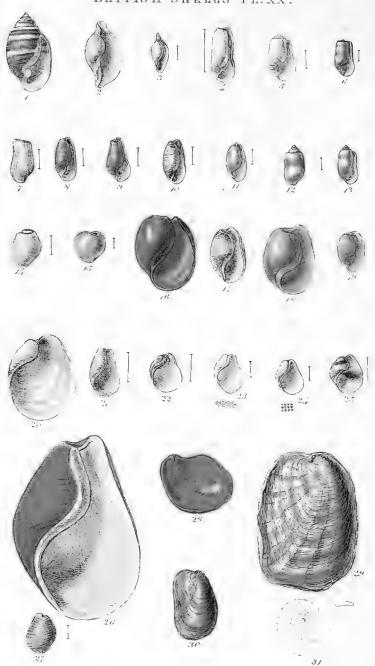
27. E. Lævis, Donovan, (Voluta.)—E., Marginella, Bulla, Volvaria, and Columbella fusiformis, Cypræola, Donovani, Muscaria, etc.—Brit. co. generally, 1 to 50 fath., Mc.

CYPRÆA.

28. C. EUROPÆA, Mont.—Cypr. and Trivia, Pediculus arctica, bullata, and diaphana.—Brit. co. generally, 0 to 50 fath., C.



BRITISH SHELLS PL.XX.



G.B. Sowerby

PLATE XX.

TORNATELLA.

T. FASCIATA, Lamk.—Voluta tornatilis, Linn., Bulimus T., T. pellucida and pusilla (young).—Brit. co. generally. N. and S. Eu.

OVULA.

2. O. PATULA, Penn. (Bulla).—Exmouth, Arran, etc., 20 fath. S. Eu. Wide aperture, Mc.

3. O. ACUMINATA, Brug.—Bulla and Volvula a.—Loch Fyne, Lamlash, Galway, etc., R. S. Eu. Narrow, pointed.

CYLICHNA.

4. C. CYLINDRACEA, Penn. (Bulla:)—Bullina and Volvaria c., oliva, and umbilicata.—Brit. co. generally, C. N. and S. Eu.

5. C. OBTUSA, Montagu (Bulla).—Utriculus, B. and C. Jerviscensis

and discors.—Brit. co. generally, C.
6. C. MAMILLATA, Philippi. — Bulla and Tornatina m. and truncatula.—Exm., Skye, Galway, etc., Mc. S. Eu. Spire sunk, apex mamillated.

7. C. TRUNCATA, Adams, (Bulla.)—B. truncatula, retusa, semisulcata.
—Brit. co. generally, C. N. and S. Eu.

8. C. NITIDULA, Lovén. — C. and Bulla n. and umbilicata.—Skye, Loch Fyne, etc., R. N. Eu. Elongated, oval.

9. C. CONULUS, Desh.—Zetland, Rr. Conical.

10. C. STRIGILLA, Lovén.—C., Bulla, and Atys s. and ovulata.—Scotland, Mr. Spirally striated.

11. C. UMBILICATA, Mont. (Bulla). — Bullina and Volvaria u. and subcylindrica.—Brit. co. gen., Mc. With umbilicated apex.

12, 13. C. LAJONKAIREANA, Basterot, (Bulla.)—Guernsey, R. Narrower, and with more raised spire than C. obtusa.

AMPHISPIRA:

14. A. HYALINA, Turt. (Bulla.) — A. diaphana and Utriculus pellucidus, minutus, and candidus.—Scarborough, Weymouth, Cork, etc. Littoral, Mc. N. Eu. Rather square.

15. A. GLOBOSA, Jeffreys, Ann. Nat. Hist. Jan. 1859.—Skye.

AKERA.

16. A. BULLATA, Müller. — Bulla Akera, B. norvegica, B. resiliens, fragilis, flexilis, Hanleyi.—Southampton, Zetland, Galway, etc. Littoral, Mc. N. and S. Eu.

Fig.

- 17. B. Cranchii, Leach.—B. punctura and striata.—Brit. co. gen. Devon, Aberdeen, Cork, etc., 50 to 100 fath., Mr. Spirally puncto-striated.
- B. CORNEA, Lamk.—B. hydatis (as of Linn.), B. navicula, B. ampulla, Haminea hydatis.—South Brit. co., 0 to 50 fath., C. S. Eu. Broad, thin.
- B. HYDATIS, Linn.—Haminea elegans.—Guernsey and Mediterranean. Narrower and more solid than B. cornea.

PHILINE.

- 20. P. APERTA, Linn.—P. Bulla, Bullaa, and Lobaria a., quadripartita, quadrilobata, and Planciana.—Brit. co. gen., C. S. Eu. Large, smooth.
- 21. P. SCABRA, Müller. Bulla and Scaphander scabra, pectinata, dilatata, and catenulifera.—Northumberland, Zetland, Ireland, etc., Mc., 5 to 50 fath. N. Eu. Oblong, serrated.
- 22. P. QUADRATA, S. Wood.—Bullea and P. scutulum.—Zetland, etc., 10 to 100 fath., R. Striated.
- 23. P. CATENA, Mont.—Bulla and Bullaca c., angustata, and punctata.
 —Brit. co. generally, Mr., 0 to 40 fath. With chain-like sculpture.
- 24. P. PUNCTATA, Clark.—Bulla and Bullea.—Devon, Swansea, Aberdeen, Clare. In sand, 60 fath., Mc. With punctured sculpture.
- 25. P. PRUINOSA, Clark. Bulla and Bulla. Devon, Northumb., Hebrides, etc. Mud, 20 to 70 fath. N. Eu.

SCAPHANDER.

- 26. S. LIGNARIUS, Linn. (Bulla.)—B. oblonga.—Brit. co. generally. 1 to 50 fath. N. and S. Eu., C.
- 27. S. ZONATUS, Turt. (Bulla.)—Young specimen taken at Zetland by Mr. Jeffreys, resembling older Norwegian specimens. More oval than S. lignarius. Spire umbilicated.

APLYSIA.

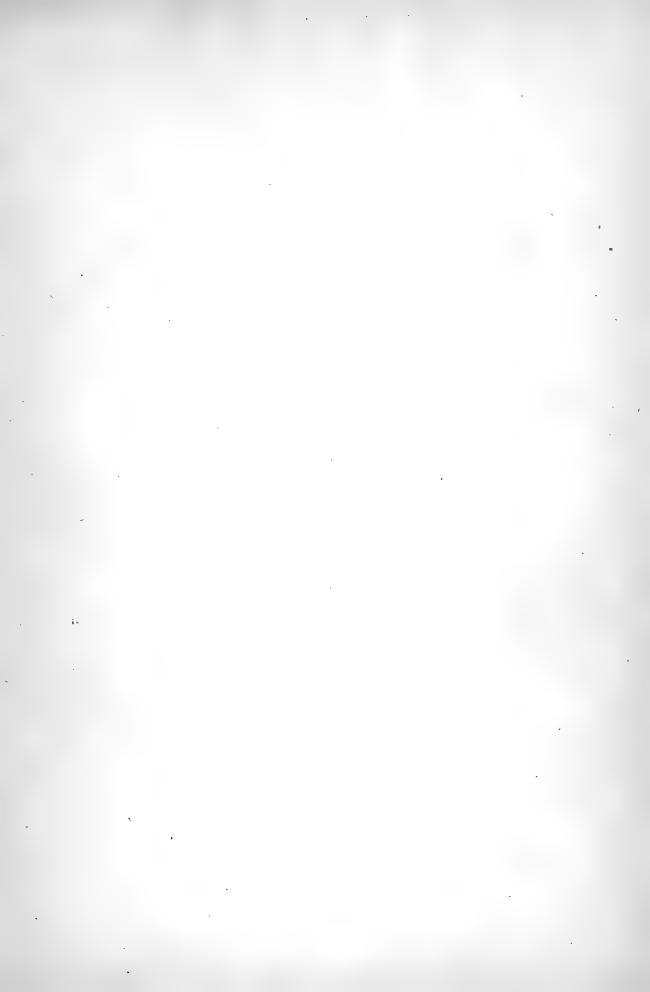
28. A. HYBRIDA, Sowerby.—Laplysia depilans, A. depilans and punctata.
—Brit. co. generally. Among seaweeds, 0 to 6 fath., C.

Pleurobranchus.

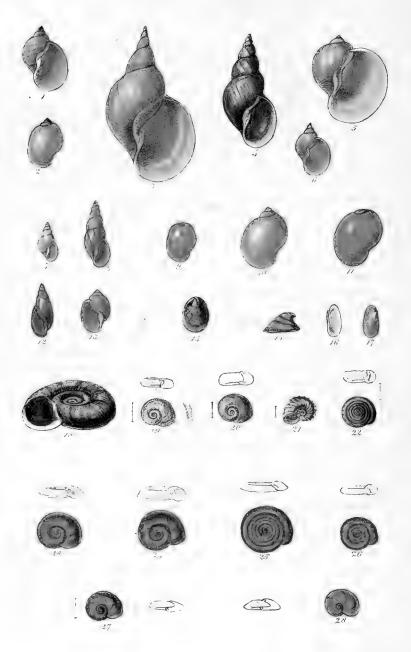
- 29. P. MEMBRANACEUS, Mont. (Lamellaria.)—Devon, Arran, Cork, etc. Low-water, Mr. Broad, flexible.
- 30. P. PLUMULA, Mont. (Bulla.)—Guernsey, Devon, Skye, etc. Littoral, R. Narrow, less flexible.

SPIRULA.

31. S. Peronii.—Once taken near Swansea, imperfect.



BRITISH SHELLS PL.XXI.



GB Sower by

PLATE XXI.

LIMNÆUS. In and near fresh-water.

1, 2. L. PEREGER, Müller (Buccinum.)—Helix, Turbo, Bulimus, and L. putris, inflata, teres, lutea, limosa, ovata, vulgaris, marginata,

intermedia, lacustris, etc.—Springs and ponds, Cc.

3. L. STAGNALIS, Linn. (Helix.)—Buccinum, Turbo, etc., stagnalis, fragilis, and major, etc.—Ponds, etc., not so generally as No. 1,

4. L. PALUSTRIS, Müller, (Bucc.)—Helix and L. fragilis, fontinalis, stagnalis, etc.—Ditches, ponds, etc., C. Whorls more numerous and less rapidly enlarged than No. 3.

5. L. Auricularius, Linn. (Helix.)—L., Helix, Bucc., Turbo, Bulimus a., patulus, etc.—Near London, Swansea, etc., Mc. Aper-

ture very wide, and outer lip partially reflected.

6. L. Acutus, Jeffreys.—L. auricularius, var. B. M.—Oban, Clumber Lake, Bloomfield, Kent, R. Apex sharp and tapering; aperture smaller than No. 5.

7. L. TRUNCATULUS, Müller, (Bucc.)—H., B., and L. truncatus, fossarius, minutus, limosus, etc.—Partly amphibious, generally diffused, C.

Small, spire equal to body.

- 8. L. GLABER, Müller, (Buccinum.)—H., B., and L. octanfracta, peregrina, elongata, octona, leucostoma, etc.—Fresh and brackish marshes, Stafford, Somerset, York, etc., R. Spire longer than aperture.
- 9. L. Involutus, Harrey.—Amphipeplea i.—Lake near Killarney, Belfast, Rr. Spire almost covered.
- 10. L. GLUTINOSUS, Müller, (Buccinum.)—Helix, Amphipeplea, and L.—Windermere, etc., Mr. Oval.
- 11. L. Burnetti, Alder.—Lakes in Dumfries and Breconshire. Inflated; spire flat; colour opaque-amber.

Physa. In and near fresh-water.

12. P. HYPNORUM, Linn. (Bulla.)—Helix, Physa, Limnaa, and Aplexa turrita and marmorata. Pools and lakes, Brit. generally, C.

13. P. FONTINALIS, Linn. (Bulla.)—Turbo, Planorbis, Bulimus, and Ph. adversus, bulla, bulloides, and fluviatilis. — Brit. pools, lakes. and ditches, C.

Ancylus. In fresh-water.

14, 15. A. FLUVIATILIS, Müller.—Patella lacustris.—Running streams, on stones and plants generally, C. Oval, apex turned to left.

Fig. 16, 17. A. OBLONGUS, Lightfoot, (Patella.) — A. and P. lacustris. More lacustrine than No. 14, Mc. Oblong, apex turned to right.

PLANORBIS. In fresh-water.

- 18. P. CORNEUS, Linn. (Helix.)—P. and H. cornu-arietis, purpureus, and similis, P. nana (young).—Ponds and ditches generally, C.
- 19. P. Albus, Müller.—Helix and P. hispidus, hirsutus.—Distribution general, C. Finely ciliated in lines.
- 20. P. GLABER, Jeffreys.—P. Lævis, Alder.—Penzance, Falmouth, Swansea, Belfast, etc., Mr.
- 21. P. NAUTILEUS, Linn. (Helix.)—P. imbricatus, Müller; P. cristatus, Turbo nautileus, etc., Mc. With horny ridges.
- 22. P. CONTORTUS, Linn. (Helix.)—P. and H. crassa, umbilicata.—Distribution general, C. Numerous close whorls; aperture semi-lunar.
- 23. P. CARINATUS, Müller.—Helix Planorbis, Linn.; P. planata and lutescens.—Generally distr., C. Whorls more rapidly increased than No. 24; keel more distinct.
- 24. P. MARGINATUS, Drap.—H. Planorbis, H., P. limbata, complanata, Draparnaldi turgidus, rhombeus, etc.—Distr. gen., C. Whorls more rhomboidal than 23.
- 25. P. Vortex, Linn. (Helix.)—Pl. compressa.—Distr. gen., C. Many whorls, very compressed.
- 26. P. SPIRORBIS, Linn. (Helix.)—P. vortex, var.—Distr. general, C. Fewer whorls than No. 25; mouth not angular.
- 27. P. NITIDUS, Müller.—Helix and P. fontanus, complanatus, and lenticularis.—Most parts of Brit., Mc. Very compressed.
- 28. P. LACUSTRIS, Lightfoot.—P. nitidus, var., Segmentina lineata, P. nautileus and clausulatus.—Ponds and ditches near London, etc., Mc. With internal divisions; lower disc flat.



BRITISH SHELLS PL.XXII.



G.B. Sewerb=

PLATE XXII.

Succinea. Amphibious.

Fig. 1. S. PUTRIS, Linn. (Helix.)—H., S., and Linnæa Succinea and amphibia.—On plants by the side of rivers, ditches, etc., C. Rather oval in form.

2. S. GRACILIS, Alder. — S. putris, var. gracilis, S. amphibia, var. Pfeifferi.—By sides of streams and in damp meadows, C. Elon-

gated, with spire produced.

3. S. Oblonga, Drap. — Helix elongata, Amphibulina o. and e.— Swansea, Glasgow, etc. Sometimes at a distance from water, R. Spire with more distinct whorls.

Conovulus. Partly marine, amphibious.

4. C. BIDENTATUS, Mont. (Voluta.)—C., N., Actaon, and Auricula alba (var.) and erosa. - Salt-water marshes, and on rocks near highwater mark all round our coasts, C. No tooth on outer lip.

5. C. Mysotis, Drap.—C. denticulatus, var., etc.—Brackish marshes,

Thames, etc., C. Outer lip with one tooth.

6. C. DENTICULATUS, Mont. (Voluta.)—C., V., Auricula, and Actaon ringens, reflexa (var. f. 7), Mysotis, and personata.—Numerous places, near the sea, C. Outer lip with many teeth.

7. C. Reflexus.—Auricula reflexa, C. denticulatu, var. Jeffreys.

Carychium.

8. C. Minimum, Müller.—Turbo Carychium, Auricula minima.—Moist places, wet Mosses, etc. Generally distr., C.

LIMAX. Land Slug, with shell under shield.

9. L. cinereus, Müller.—L. maximus, maculatus, Limacella parma. Brit. gen., C.; Eu. Shell oval, large, thin.

10. L. AGRESTIS, Müller.—L. concava and obliquus.—Brit. gen., C.

Foss cr. Shell small, oblique.

11. L. BRUNNEUS, Drap. — L. concava. — Under stones, etc. minute, square.

12. L. FLAVUS, Linn. — Limacella unquiculata and variegata. — The large Cellar Slug. Shell thick, rather square.

TESTACELLA. Slug with shell or tail.

13. T. Maugei, Férussac.—Clifton, Taunton, Plymouth, Swansea, etc., Mr. Large, and more square than 14.

VITRINA. Shell not including the whole Slug.

Fig.

14. T. HALIOTOIDEA, Drap.—T. europæa, T. scutulum. — Near London. Channel Isls., etc., Mc.

15. V. PELLUCIDA, Müller, (Helix.)—II. diaphana, Helicolimax, Limacina major, etc.—Various parts of the country, under stones, etc., Mc. Eu. Very transparent.

16. V. Draparnaldi, Jeffreys.—V. oblonga, H. brevipes?—Less glo-

bular than 15, R.

ZONITES. Transparent, thin-edged Snails.

17, 18. Z. CELLARIUS, Müller, (Helix.)—H. and Z. lucida and nitens.—Brit. gen., C.

19, 20. Z. NITIDUS, Müller, (Helix.)—H. and Z. nitens, lucida, tenuis, Succinea, etc. — Less depressed than 17, 18, with larger umbilicus.

21. Z. CRYSTALLINUS, Müller, (Helix.)—H., Z., Discus, and "Polita" c., eburnea, vitrea.—In damp spots, among stones and Moss. Minute, white, transparent.

22. Z. NITIDULUS, Drap.—Generally distributed, Mc. Mouth oblique.

Umbilicus small.

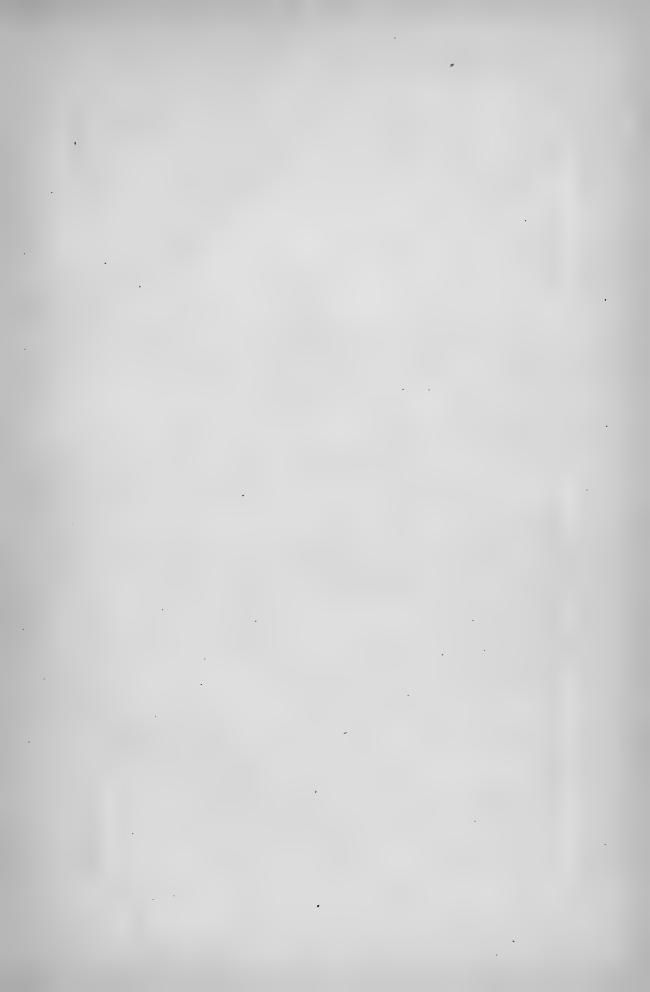
23, 24. Z. ALLARIUS, Miller, (Helix.)—H. and Z. glabra, alliacea, nitens, tenera, lurida, etc.—Distr. gen., C. Smaller and more convex than 17, 18.

25. Z. EXCAVATUS, Bean, (Helix.)—II. and G. nitida, lucida, etc.—
Durham, Northumberland, Galway, etc., Mc. Umbilicus very large.

26, 27. Z. RADIATULUS, Alder, (Helix.) — Distr. gen., C. Striated,

minute.

28, 29. Z. Purus, Alder, (Helix.)—H. and Z. polita, and Helicella nitidosa, electrina, etc.—Most common North Engl. Whorls less close and more oblique than 21.



BRITISH SHELLS PL. XXIII.



G. B. Sow

PLATE XXIII.

HELIX. Snails with thickened lips.

1. H. PISANA, Müller.—H. zonaria, cingenda, rhodostoma, strigata, albella.—Cornwall, S. Wales, Dublin, C. S. and N. Eu.

2. H. ASPERSA, Müller.—H. grisea, hortensis, variegata, vulgaris, etc.
—Common in all our gardens and hedges.

3. H. VIRGATA, Costa. — H. variabilis, ericetorum, zonaria, etc. — In sandy and chalky places, C. More compressed than No. 1.

4. H. CANTIANA, Mont.—H. pallida, etc.—South and west Engl., C.

5. H. ERICETORUM, Müller.—H. itala, striata, albella, erica, nivea, caspita, etc.—Chalky and sandy places, C. Depressed, delicately banded; large umbilicus.

6. H. RUFESCENS, Pennant.—H. rufina, montana, cælata, clandestina, etc.—Most common in southern, chalky and limestone districts. Depressed, striated; whorls slightly angular. Generally lighter than our figure, sometimes nearly white.

7. H. LAPICIDA, Linn.—H. acuta, affinis, Carocolla l.—Chalk and limestone districts, C. S. and N. Eu. Sharply angular.

8, 9. H. HISPIDA, Linn.—H. rufescens, sericea, concinna (var. without hairs), etc., plebeia.— All parts of Brit., C. More depressed than H. sericea, with larger umbilicus.

10. H. Fusca, Mont.—H. subrufescens.—Brit. gen., Mc.

11. H. SERICEA, Drap.—H. hispida, globularis, granulata, etc.—Granulated, hairy. Mouth wider than 8. Small umbilicus.

12. H. OBVOLUTA, Müller.—H. trigonophora, etc.—Ditcham Wood, Hampshire. In Moss at roots of trees, Rr.

13. H. fulva, Müller. — H. terrestris, trochiformis, nitidula, etc.— Pretty general and common. Conical, minute, transparent.

14. H. POMATIA, Linn.—Southern chalky districts, S. Eu., C.

15. H. CAPERATA, Mont.—H. striata, H. crenulata, etc.—Chalk-pits, etc., C.

16. H. CARTHUSIANA, Müller.—H. nitida, carthusianella, rufilabris, etc.
—Chalk-districts of Surrey and Kent, C.

17, 18. H. NEMORALIS, Linn.—H. hortensis, fasciata, hybrida, etc.—Cc. A peculiar flattening near the base of aperture.

19. H. Arbustorum, Linn.—Common and general. Brown-marbled. Edge of aperture different from 17, 18.

20, 21. H. ROTUNDATA. — H. radiata, Turtoni, etc. — Common and general.

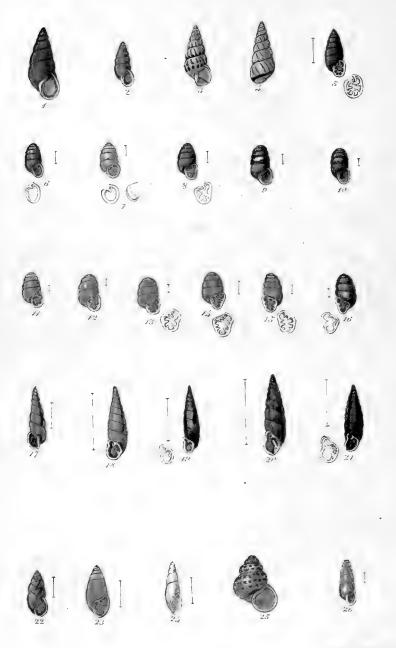
22, 23. H. PULCHELLA, Müller.—H. costata, paludosa, crenella, minuta, etc.—Common and general under stones, etc.

24. H. REVELATA, Férussac. — Cornwall, Devon, Torquay, Guernsey. Rare. A transparent, greenish, hairy shell.

- Fig. 25. H. APERTA. H. neritoides, naticoides, etc. A single specimen found in Guernsey. Not uncommon in S. Eu. Our specimen
- 26. H. UMBILICATA, Mont. H. rupestris, etc. On perpendicular heights and under stones, C.
- 27. H. PYGMÆA, Drap.— H. minuta, etc.—Common in damp places. 28. H. LAMELLATA, Jeffreys.—H. Scarburgensis, seminulum.—Brit. and
- Germany, C.
 29. H. ACULEATA, Müller. H. spinulosa, etc. Among Moss and stones, etc., C. General.



BRITISH SHELLS, PL.XXIV.



: E . muerh

PLATE XXIV.

Bulimus. Long Snail.

Fig. 1. B. Lackhamensis, Mont.—B. montanus, Montacuti, Eua montana. -Kent, Surrey, Gloucester, Selborne, N. and S. Eu., R. as Brit. Shagreened.

2. B. obscurus, Müller.—Turbo rupium, B. hordaceus, etc.—C. and

general. Surface smooth.

3, 4. B. Acutus, Müller.—Helix barbara, B. cretacea, articulatus, Turbo fasciatus, etc.—On sand and limestone in marine neighbourhoods, C.

Pupa. Small Snails, among Moss, stones, etc.

5. P. SECALE, Drap.—Turbo, Helix, Chondrus, and Vertigo juniperi and cylindricus.—S. Engl., Channel Isls., C. S. Eu. Larger and more tapering than the other sp.

6. P. UMBILICATA, Drap.—Turbo, Bulimus, Helix, and P. muscorum, cylindraceus, bidentata, etc.—C. and general, Eu. Mouth oblique,

long, one tooth.

7. P. Muscorum, Linn.—T., P., H., B. marginata, chrysalis, uniden-

tatus, etc.—C. and gen. A rib behind the outer lip.

- 8. P. ANGLICA, Férussac.—Vertigo, Turbo, and P. a. and ringens.— Scarborough, Newcastle, Guernsey, etc., Mr. More cylindrical than 5.
- 9. P. EDENTULA, Drap.—H. exigua, Vertigo, Helix, and Jamimia e., nitida, etc.—C. and gen. No teeth in aperture; smooth.
- 10. P. MINUTISSIMA, Hartmann.—P., Vertigo, Alæa cylindrica, obtusa, muscorum, etc.—Bristol, Salisbury, Skye, etc., R. as Brit.; C. in S. Eu. No teeth in aperture; striated.
- 11, 12. P. PYGMÆA, Drap.—P., T., V., H., Alæa, etc., sexdentatus, quinquedentatus, vulgaris, etc.—The lighter variety, P. alpestris, C. and general. Four or five teeth.

13. P. Substriata, Jeffreys.—Vertigo, Turbo, Alæa sexdentata, curta, etc.

—C. and gen. Very cylindrical; six teeth; striated.

14. P. ANTIVERTIGO, Drap.—P., V., Alæa octodentata, septemdentata, palustris, etc. — Near Swansea and London; Bristol, Devon, Northumberland, Ayr, Mr. Ireland. Aperture subtrigonal, eight or nine teeth.

15. P. Pusilla, Müller.—Helix vertigo, and V. heterostropha.—S. Wales, Northumberland, Belfast, etc., Mc. Sinistral, with seven teeth.

16. P. Venetzh, Charpentier.—Turbo, Vertigo, and P. vertigo and angustior.—Swansea, Cork, Clare, R. Sinistral; four teeth and a flat fold on columella.

BALEA.

Fig. 17. B. FRAGILIS, Drap. (Pupa.)—Bulimus, Pupa, Clausilia f., perversus.

—C. and gen. Under bark on trees, and under stones.

CLAUSILIA. With a twisted clausium on columella.

18. C. LAMINATA, Mont.—Helix, Turbo, Bulimus, and Pupa bidens and perversus and derugata.—S. Brit. principally. Among dead leaves, and on Beech-trunks, Mc. Smooth, broad.

19. C. NIGRICANS, Maton and Rackett.—Strombiformis, Turbo, and Odostomia perversus, bidens, parvula, etc.—C. and gen.; under stones, on walls and trees, etc. Narrow, striated.

C. BIPLICATA, Mont.—Helix, Turbo, Odost., C. perversa, plicata, ventricosa, etc.—Near London, etc., Mc. Two folds on columella.
 C. PLICATULA, Drap.—Turbo and C. conversus.—Charlton Wood,

21. C. PLICATULA, *Drap.*—*Turbo* and *C. conversus.*—Charlton Wood, Kent, Hastings, Gloucestershire, etc., R. Numerous plaits on columella above fold.

ZUA.

22. Z. LUBRICA, Müller, (Helix.)—Turbo, Bulimus l., subcylindrica, muscorum, etc.—C. and gen. Among leaves and under stones.

AZECA.

23. A. TRIDENS, Pulteney, (Turbo.)—Helix, Pupa and Cionella Goodallii, Britannica, etc.—C. and general. Habits as Zua and Pupa.

Achatina.

24. A. ACICULA, Müller.—Buccinum, Bulimus, Helix octona, terrestre, etc.—In marshy places, among Grass, etc., C. S. Eu.

CYCLOSTOMA. Snail with operculum.

25. C. ELEGANS, Müller, (Nerita.)—Turbo reflexus, T. tumidus, striatus, elegans.—Chalky districts of S. Engl., C.

Acme. Cylindrical Snail with operculum.

26. A. LINEATA, Drap. (Auricula.)—Turbo, Carychium, Cyclostoma, Bulimus fuscus, Cochlea minuta.—Bristol, Pembroke, Clare, Dublin, etc., R.

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